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PART I.

ORIGINAL COMMUNICATIONS.

ART. VIII.—*Observations on Cholera, and especially on its Mode of Propagation.* By ROBERT J. GRAVES, M. D., F. R. S.

SINCE the publication of my last paper in this Journal, on the propagation of cholera, the disease has committed considerable ravages in Great Britain and Ireland. The history of the epidemic, in these islands as well as in Europe, leaves no doubt that its appearance is not connected with the prevalence either of cold or heat, of dryness or moisture. It arose in Bergen, in Norway, in the month of January, exhibiting excessive virulence, and occasioning an almost unprecedented mortality, during cold so severe that mercury never thawed; and it prevailed in Dublin, in unusually hot weather, throughout the months of June and July. While the disease raged in Glasgow, the weather was very wet and rainy; but while it prevailed in Limerick and Dublin, almost uninterrupted

drought was complained of. During the recent visitation, the epidemic was not observed to prevail in localities possessing all the physical requisites so much dwelt on by the advocates of the endemic origin of cholera, more than in others entirely free from malarious influences. It was not found to frequent those parts of Dublin nearer to the river more than those remote from it; neither did a greater number of cases, in proportion to the population, occur in the poorer and less healthy districts of the town, than in the more opulent and better situated quarters. It was to be found equally in the most elevated parts of the city, such as High-street and Thomas-street, and in Luke-lane and Brunswick-street, which are situated nearly on a level with the river. The best ventilated and drained streets were not more exempted than those in an opposite condition; thus many cases were observed in Merrion-row, Upper and Lower Baggot-street, Wellington-road, and Pembroke-street, and also in some of the most healthy outlets, such as those in the vicinity of Rathgar.

It is a fact worthy of being recorded, that in Tralee, the best part of the town, that which is occupied by the more wealthy inhabitants, was the part chiefly devastated; the well clad, the rich, and the temperate were carried off, while the poor and intemperate who inhabited the lower quarter escaped. In Limerick, too, it was remarkable that the disease claimed many victims in the lunatic asylum, although that establishment is extremely well ventilated, and is a model of cleanliness and good management, and quite free from all the circumstances, such as damp, bad odours, or crowding, to which the origin of the disease is commonly attributed. In the case of the unfortunate inmates of the lunatic asylum, it is obvious that neither fear nor their imagination could have had any influence in promoting the spread of the disease; and as the diet of these persons was particularly good and regular, the contrast between their state and that of the prisoners in the Limerick gaol was in many physical circumstances very striking; for in

the gaol all manner of nuisances necessarily abounded, in consequence of the enormous number of prisoners who were crowded into that establishment, the number far exceeding that which the gaol was originally intended to accommodate. And yet, strange to say, while, as I have already mentioned, the inmates of the lunatic asylum suffered so much from cholera, the prisoners in the gaol altogether escaped. It is singular that, in opposition to facts such as these, Mr. Wakley, M.P., the coroner for Middlesex, should have ventured to assure the gentlemen composing the jury on a coroner's inquest held upon a person who died of cholera, "that he had never known a well-fed person die of the disease." Mr. Wakley's experience may miraculously support his theory, and must have been wonderfully relished by a well-fed metropolitan jury; but in Dublin, neither corpulence nor even extreme obesity were found to protect those who enjoyed such advantages from the shafts of the destroying angel. Two remarkable cases of death from cholera occurred in persons of unusual fatness; one of the victims was of such enormous size as to have surpassed all the previous practice of the Cook-street coffin-makers. According to my own experience, and that of most of my medical friends of this city, neither enjoyment of the best health, nor youth, nor temperance, nor an athletic frame of body, seemed to afford protection. The strong appeared to contract the disease as often as the weak, the young as the old, the temperate as the intemperate; and the infant at the breast fell a victim as rapidly as the mother who nourished it.

I regret to state, and the statement is corroborated by many other physicians in Dublin, that the type of cholera has not lost any of its virulence, and is fully as bad, if not worse than when it appeared here in 1832 and 1834. Seeing then the intense fatality of this epidemic, and its wonderful diffusion over the whole civilized world, it becomes our duty now, more than ever, to study attentively and seriously the laws which regulate its propagation. Deeply impressed with the respon-

sibility which attaches to every one who takes upon himself to pronounce an opinion upon a question so important, I have deemed it to be my duty to watch the progress of the epidemic in Dublin with the greatest attention, for the purpose of collecting new and authentic facts bearing on the question of its contagiousness. These facts I shall now proceed to make public, arranging them in a certain order.

First, Instances of cholera transplanted, as it were, from one locality to another, and spreading in the latter.

1. Mr. Shaw, of Earl-street, was called to see a Mrs. B., who was suffering from an attack of cholera. A friend of this lady, a Mrs. G., residing at the distance of half a quarter of a mile, came to attend her, having at the time an infant at her breast, which she brought with her. During Mr. Shaw's attendance on his patient, who subsequently recovered, Mrs. G. requested his attention to her own infant, who was ill, and, as she thought, suffering from the effects of cutting a tooth. The child, however, was evidently labouring under an attack of cholera, and died the same night. The mother returned home, and was attacked the next day, and shortly after three of her children also contracted the disease: the mother and three children all died.

2. Dr. M'Cormac, of Belfast, communicated to me the particulars of the following awful visitation:

A paper manufacturer, named Blow, living in Belfast, sickened nearly at the same time with his wife, and both died of cholera; their son shared the same fate; the female servant in the house and a man servant were seized with symptoms of the disease, but recovered. Mrs. Blow's brother, Mr. Miller, who resided at a distance, on the Carrickfergus shore, visited his sick sister, contracted cholera, and died in his own house. His nephew, Mr. Shaw, visited Mr. Miller, and also died of the disease, in his lodging below Hollywood. Mr. Shaw was attended by his sister, who took the malady and died likewise. They were both brought into town for interment in the same

hearse. This is an instance of double transplantation; from Belfast to the Carrickfergus shore in the first instance, and from the latter place to Hollywood in the second. Another fact connected with this case is especially deserving of attention. Three women, sisters, who were employed to wash the linen, bed-clothes, &c., of the deceased Mr. and Mrs. Blow, were assisted by a young girl; these four individuals all contracted the disease, and died within a few hours of each other, as did also a carter who assisted in placing the body of Mr. Blow in the coffin.

3. A recruit named William Gordon, arrived from Glasgow, at Beggar's Bush Barracks, on the 24th of June, 1849. It is supposed he brought the contagion of cholera with him, as he took ill of that disease on the 27th, and died on the 28th of June. A child about four years old took cholera in the room the recruit died in: this child died. On the 3rd of July Mrs. Duffy, who was in the same room with the recruit, took cholera, and died on the 4th of July. A servant maid of Mrs. Duffy's, who was staying in the room with her on the 3rd, and attended her during her illness, left the room on that day, and on the 6th took cholera. She was removed from the barracks to the Brunswick-street Cholera Hospital on the 7th. Between the 28th and 3rd July a woman, wife of a soldier of the 2nd or Queen's Own, took cholera and died; she was in the neighbourhood of the recruit Gordon. A child belonging to the 2nd or Queen's Own took cholera in the room the soldier's wife was staying in, and recovered. This account has been furnished to me by Mr. Reid of Mount-street.

4. The Rev. Mr. Disney, Rector of Slane, has sent me the following fact:—"In July a poor beggar-woman came to Slane, and was taken ill just as she entered the town. A man named Thomas Vaghey, who was employed for the purpose of preventing the entry of beggars into the town, raised her from the ground where she was lying, and carried her to a shed, where she died; he got cholera in less than two hours afterwards,

and died; his sister, who attended him, likewise took the disease, and died the day after. Up to the time this man got the disease from the strange beggar, nothing like cholera existed in Slane."

5. Dr. Beauchamp is my authority for the following instance. A woman about forty-five years of age, living in New-street, went to St. Andrew-street to nurse a child ill of cholera; the child recovered, but the woman returned home, took ill, and died. Her husband and two of her children contracted the disease, and shared the same fate.

6. Surgeon Leney, of Bray, attended Eliza Sinnott, aged thirty years, on the 16th June. She had gone to Dublin on the previous day, and visited a friend labouring under Asiatic cholera. At 7 o'clock in the evening of the 16th she was seized with cholera, and died at 7 o'clock on the morning of the 17th. Her sister, who attended her, had an attack on the 20th of June, but recovered. There was no other instance of cholera in the town previously to these cases. Surgeon Leney, in a letter written on the 30th April, 1849, says:—"I was of opinion that cholera was not contagious; but this opinion has been shaken by the following cases which occurred here [Bray] recently. A woman named Catherine Doyle, sixty-six years of age, died on the 21st of April, of cholera. A woman in the neighbourhood, named Mary Neill, forty-two years old, washed the body of the deceased, preparatory to interment, and was taken ill on the morning of the 23rd of April, and died at 4 o'clock on the morning of the 24th. William Neill, her son, a boy eight years old, showed symptoms of the disease at 4 o'clock on the morning of the 24th, and was dead at 1 o'clock, A.M., on the 25th April. His sister, Mary, nineteen years of age, was attacked at 4 o'clock on the morning of the 28th, and died at 8 o'clock in the evening of the same day."

7. I am indebted to Dr. M'Cormac, of Belfast, for the following instance:—"At the beginning of April, 1849, a car-

driver from Lisburn, where cholera then raged, was seized with the disease at Ballinderry, seven miles distant from the former town; he was lying in the street in Ballinderry, until kindly admitted by a relative of his own into her house, and placed in her husband's bed. The driver died, and was duly waked. His kind host and hostess proceeded to occupy the now vacant bed, when first the man took cholera and died; then the woman sickened with the like fatal result; and, lastly, two of their children perished; while the only member of the family left alive was an idiot girl. There had been no case of cholera in Ballinderry before this melancholy occurrence."

8. The Rev. Arthur Hyde, rector of Mohill, states the following very awful instance (in its results) of infection transplanted by means of clothes:—"A poor man and his wife, almost the first sufferers from cholera in this village, died, and were interred so speedily that their friends had not an opportunity of waking their bodies. They came, however, a distance of nine miles, and, taking away the clothes to the residence of the deceased, waked the clothes instead of the bodies. Eleven persons attended the wake, all of whom were seized with cholera, and died after great suffering. Dr. Dukes, our dispensary physician, attended these people, and fully confirms my statement."

9. Dr. Reid of Mount-street has supplied me with the following facts also. "Mrs. Moylan, living at No. 2 or 3 Mellifont-avenue, Kingstown, took cholera about the 3rd July, and recovered. In eight or nine days after this attack, some friends came from England on a visit; one of them, a young lady, took cholera after her arrival, and died; another, an old lady, removed, on the death of the young lady, to a house some four or five doors distant in the same avenue: in a few days after her removal she was attacked with cholera, which proved fatal. On the 10th of July, Miss Macdonough removed from Northumberland-avenue to the house in Mellifont-avenue, where the first-mentioned deaths occurred. On the 12th, two

days after, she took cholera at 8 A.M., and died at 7 P.M. The servants said that the bed-clothes used by the young lady were also used by Miss Macdonough."

10. The subjoined instance of transplantation occurred in the practice of a friend of Dr. Leet's, from whom I have received it. Dr. —— visited a young girl stopping at the house of Mr. O'Neill, a respectable tanner in this city. On seeing the young lady, he at once pronounced her to be ill of cholera, and expressed his apprehension that there was but little hope of recovery. Mrs. O'Neill, on learning the character of the young lady's malady, at once removed to Cabra, a healthy suburb at the north side of the city, where her daughter-in-law resided. The physician had scarcely returned home from his visit, when he was sent for to go to Cabra to prescribe for Mrs. O'Neill, who had been attacked with decided cholera, vomiting, purging of rice-water, and symptoms of collapse. She recovered. The servant woman who attended her at Cabra took the disease, and died in the house, as also the woman who was brought in to wash some of the clothes.

11. Dr. Hammerton, of Castletown, Navan, recites several cases, in which there is reason to believe that the disease was propagated by means of the pernicious custom of waking, so pertinaciously adhered to by the Irish peasantry. In his district the wake of a man, who died of cholera, first gave rise to the disease. A man named John Crahan, who, amongst others, attended the wake, was seized with the disease in a very violent manner. In another case, the person who washed the body sickened the same night, and was dead before morning. "Another mode," says Dr. Hammerton, "by which cholera is, I think, propagated in the rural districts, is the following, viz.:—a herd goes to a market-town with his master's cattle, where cholera is raging, returns, and in a day or two is seized with the disease. I have heard of more than one instance of the disease being disseminated in this way."

12. Dr. Hudson, of Navan, mentions two indubitable in-

stances of transplantation in the following letter which I have received from him: "According to your wish, I send you a note of some cases in which the diffusion of cholera seemed to follow from the introduction of a case into a house in the neighbourhood. The first instance was that of a man named Kiernan, who came from a place in which cholera was prevalent, to his brother's house, in a lonely part of the country, he being at the time in the commencing stage of the disease. He died on the following day, and on the day after his death his mother and brother were attacked with the disease. A woman, named Mary Fay, died of cholera in Navan on the 3rd of July. A child, eight years old, who had lived and slept with her up to the day of her death, was removed on that day to a house about a mile from the town, situated in a small hamlet. This child had cholera on the 6th; during her illness she was constantly visited by a woman named Mary Downes, who lived in the adjoining house. This woman sickened on the 12th."

13. For the following fact I am indebted to Drs. Bernard and Wallace, of Charleville, in the county Cork: "A healthy man, living sixteen miles from Limerick, went to that city in March last, when cholera was raging there; he returned home on the same day, and in the course of the evening was seized with diarrhœa, and before he sent for, or indeed could procure medical advice, he fell into collapse, and died of Asiatic cholera. Before he went to Limerick he was in excellent health, and, what is more to the point, so were his mother, sisters, and brothers, whom he found well on his return home. Yet, on the morning succeeding his death, three of the family were attacked, and died of the disease in twenty-four hours." Drs. Bernard and Wallace, who are by no means decided contagionists, in communicating this fact to me, observe:—"We see this fact favours the doctrine of contagion,—since, first, the man was perfectly well until he went to Limerick, where cholera was raging; secondly, since no disease of the kind was

epidemic in his own locality, his family and neighbours being previously in good health; thirdly, as three members of his own family took the disease and died of it, after his death, from the same cause; and, lastly, since none of his neighbours living near him contracted the disease, as it is probable they would have done if the atmospheric poison was in the locality at the time."

14. Dr. Trenor has sent me the following case:—"Mrs. D., residing at Montpelier-hill, died of cholera early on the morning of the 17th June. Her daughter was asked to spend the following day in a house within two doors of her mother's residence. One of the children in this house, a boy, four years of age, she caressed and nursed during the day, and on the 18th this boy was attacked with cholera, and had a very narrow escape."

15. Dr. Clarke, of Naas, is my authority for the following very important cases:

"A woman named Allen, wife of a herd living at Sherlockstown, near Sallins, County Kildare, was sent from Dublin the infant child and clothes of a relative of her's who had died of cholera in that city. Two days afterwards she was seized with cholera and died; this was the only case in that locality. A man and his wife, named Finnemore, living near the village of Rathmore, County Kildare, went to Dublin to see the Queen last August. The evening of the day on which they returned the wife was seized with cholera, and died next morning. The succeeding night the husband was attacked, and died the following morning. A woman named Johnson went to the house to wash the clothes of the deceased; in two days she also fell a victim. The Finnemores were of independent circumstances, and lived in a very neat cottage, isolated from any other houses; the locality around was remarkably healthy: and no other case of cholera occurred in that district. A carman named Connor drove to Dublin from Naas last August; on his return he was seized with cholera at Rathcoole, and died after his arrival at Naas."

The foregoing list of instances in which cholera was carried from one locality to another, where no such disease had previously existed, and where, notwithstanding the spread of the disease was from an imported source, other individuals were affected,—this list, I say, exhibits almost indubitable proofs of the contagious nature of cholera; and the facts therein recorded cannot, in the estimation of any candid mind, lead to any other conclusion than that which I have advocated.

I now proceed to another order of cases, in which the diffusion of cholera took place under circumstances which, if not demonstrative of its contagiousness, at least render that quality of the disease highly probable, if we rest it upon these facts alone, but, when coupled with the preceding, leave no doubt upon the subject.

Dr. Wharton, of York-street, has communicated the following:—"Mrs. O'N., of Camden-street, died of cholera on the 14th July, 1849. Two days after her decease, her servant, Eliza O'Brien, who constantly attended her during her illness, sickened, and was saved with difficulty. A young woman named Ellen M'Loughlin visited this Eliza O'Brien more than once, contracted the disease, and died on the 17th July. On the 19th July Mrs. O'N. (the deceased lady's daughter), caught the disease, and with difficulty recovered."

Dr. Trenor, of Mount-street, stated to me, "that he saw a case in Sackville-street, in company with the late Mr. Carmichael. The sufferer, a lady, had died of cholera on Sunday, and before the body was placed in the coffin on Monday, the nurse took a little child (three years old) in her arms into the room, and placed her over the body to see it for the last time. At 5 o'clock on the same day the child was attacked with cholera in a very severe form, but ultimately recovered.

A remarkable proof of the contagiousness of cholera was exhibited in the family of Mr. Murphy, a wealthy salesmaster.

Mr. Murphy lived in a beautiful villa near Stillorgan, and, notwithstanding that he had amassed a large fortune, at-

tracted by the force of habit, he often frequented the scenes of his former labours, a day hardly passing that he did not attend at Smithfield.

Mr. Murphy was seized with cholera, which proved fatal; his eldest son was subsequently attacked, and likewise died; one of his daughters also fell a victim, and four of his domestics and attendants were carried off by the same fatal disease.

Mr. Murphy's residence was situated in an extremely healthy, elevated, and well-drained part of the country, surrounded by an extensive demesne; and it is remarkable that, of all the inmates of his house, he should have been the first that succumbed, being the person whose habits most exposed him to contact with the infected.

Mr. Henry Halahan, of Stephen's-green, has furnished me with the following examples:

Catherine Higgins, aged 70, had been living in the country all her life until lately, when she was in the habit of coming to Dublin to take care of her daughter's children. Her son-in-law being ill of cholera, she was sent for, and shortly arrived at his house, fresh from the country. Soon after her arrival he died, and on the night following, she, with her daughter and two grand-children, slept in the same bed in which the man died, taking no precaution but the removal of the sheets. In the night she felt herself unwell, complaining of purging, vomiting, &c.; everything was done to save her, but with no effect, as she soon sank into collapse, which terminated fatally at 7 o'clock the same evening.

The late Surgeon Rooney was seized with cholera on Monday, August 19th, and died on the 26th. On the 25th, the day before his death, his daughter took ill, and sank under the disease the same evening; his nephew was attacked on the 28th August, and died the same evening; a grand-daughter took the malady on the day of his death, 26th August, but recovered; and on the 30th his son-in-law was attacked with diarrhœa, and had a narrow escape.

This case is the more valuable, as Dr. Rooney's house was airy and well ventilated, and situated in one of the best drained and healthiest suburbs, viz., Mountpleasant-square.

Dr. Leet has furnished the following interesting and remarkable instance of cholera produced by exhalation from an open grave:

"Dr. ———, with his wife and a friend, were on a visit at the Botanic Gardens, Glasnevin, which adjoin the well-known burial-ground at that place. Coming from the gardens they were induced, from curiosity, to walk through the graveyard, in the course of which they observed several uncovered graves, containing some coffins recently deposited, and from one of them they were struck with a very offensive smell; a cholera corpse had been interred in it. Beyond the smell there was nothing unusual felt by any of the party, until their return home, when all were immediately attacked with symptoms of cholera. With Mrs. ———, indeed, I might say, no symptoms at all preceded the collapse, which seized her at 1 o'clock A. M., and terminated fatally at 6 P. M. the same evening. The other two were saved with much difficulty.

Mr. Vance, of 63, Upper Dorset-street, died of cholera, on Monday, 25th June. His sister-in-law, Mrs. Johnson, resident in the same house, sickened on the 28th, and died on the 29th; her mother removed to Florinda-place, and was there seized with the disease on the 1st July.

The boy who was employed to carry down Mr. Vance's bed was also attacked with cholera.

Mrs. Shea died at the Crescent, near Clontarf, of cholera, on the 7th June. On Sunday, the 10th, the Rev. Mr. Tyrrell came up from Kinnealy, where there was no cholera, and breakfasted and dined at the same house in the Crescent where Mrs. Shea died. On the following Tuesday he was seized with cholera, which terminated fatally on the next day, the 13th, at 2 P. M.

Miss ——, sister to the deceased Mrs. Shea, came up from

the County Louth to visit her, and saw her when dead, she remained in the house, sickened at 3 A. M. on the 13th, and died same day at 2 P. M.

Mr. Drake, apothecary, Rathmines-road, attended Mr. and Mrs. Sherry, both of whom died of cholera. During their illness he was most assiduous in his endeavours to relieve them. A few days after their death he was attacked with premonitory diarrhœa, on the 18th of June, but arrested its further continuance by means of acetate of lead and opium. He thought himself well during the week, and regularly attended to his business, but felt all the time a great thirst, though free from either diarrhœa or sickness of stomach. On Sunday, the 24th, he was seized with a sudden attack of cramps and collapse, with scarcely any diarrhœa or vomiting, and died in a few hours.

The preceding facts indicate so clearly the contagious nature of cholera, and contradict so strongly the official announcement of the Central Board of Health, that I am persuaded its members, Sir Philip Crampton, Sir Henry Marsh, and Doctor Corrigan, must now regret having lent the no small weight of their names and of their authority to a Circular containing the following passage:

"The Commissioners of Health are anxious to impress upon all persons the important difference that exists between cholera and fever, with respect to the mode of propagation of these epidemic diseases. Fever, it is well known, is highly contagious, or easily propagated from one individual to another; while all experience shows that cholera is rarely, if ever, contagious; consequently, the separation of the sick from the healthy—a measure so essential in checking the spread of fever—is not required in cholera; and the friends and relatives of persons attacked with cholera may be under no apprehension of catching the disease, and need not be deterred from affording to the sick, in their own dwellings, every needful assistance and attention. The Commissioners of Health, after

mature consideration, do not advise that cholera should be met by an extended system of hospital accommodation, such as is needful in epidemics of fever, but recommend, in preference, a general system of prompt and efficient dispensary relief. The non-contagious character of cholera fortunately removes all objection to the receiving of persons suffering under the disease into the ordinary hospitals of the country, whether county infirmaries or fever hospitals, all of which the Commissioners of Health advise should be open and in readiness to receive destitute patients in cholera."

The advice of the Commissioners thus given, after mature consideration, no doubt influenced many friends and relatives who now no longer need assistance and attention.

The recommendation of the Commissioners, that the ordinary hospitals of the country should be opened for the reception of cholera patients, has led to consequences not less unfortunate to the other inmates of these hospitals, among whom the disease spread, notwithstanding the above official predictions. Thus, in the fever hospital of Tulla many caught the disease, and in Ennis the following letters sufficiently attest the same melancholy result:

"At a meeting of the Sanitary Committee yesterday evening, the following letter was read from Dr. Whitestone:

"'"*To the Sanitary Committee.*

"'Gentlemen,—As one of the physicians at present in attendance at the fever hospital, a part of which has been allocated for the reception of cholera patients, I feel it my duty to call your attention to the alarming fact, that several patients in the hospital have been already attacked with cholera; and to inform you that, in my opinion, many more will be similarly affected before long. Under these circumstances, I would strongly recommend you immediately to take steps to prevent the fatal consequences which must result from a continuance

of the practice of receiving others than cholera patients into the hospital for the present.

" ' I have the honour to be, Gentlemen,

" ' Your obedient Servant,

" ' Francis Whitestone,

" ' *Surgeon.*

" ' *Bindon-street, March* 25, 1849.' "

" The following statement on the subject was also subsequently submitted to the Board by Dr. O'Brien:

" ' In consequence of the very rapid and fatal spread of cholera amongst the patients and others in the fever hospital, I beg to suggest to the Sanitary Committee the imperative and urgent necessity of providing *separate* accommodation for the persons labouring under both diseases. This can be done either by stopping the admission of cholera patients into the fever hospital, and providing accommodation for them elsewhere, or by removing the fever patients to another establishment.

" ' George O'Brien,

" ' *One of the Physicians to the Fever Hospital.*

" *Ennis, March* 25, 1849."

The danger resulting from the indiscriminate admission of cholera patients into hospitals intended for the reception of persons suffering under other complaints, is further proved by the following extracts from the Medical Gazette of April 6, 1849; and, from inquiries I subsequently made, I have no reason to doubt the perfect accuracy of the statement. The fever hospital referred to is situated in the town of Lisburn, a very clean and healthy place, and more than usually free from the nuisances, incidental to towns. Lisburn is twelve miles distant from Belfast.

" From its first appearance, on the 24th January, till now (March 29), 223 cases have been reported: of these, 125 recovered, 75 died, and 23 remain under treatment. For three

weeks after the first two or three cases, the disease made little progress; but suddenly after that it broke out with fearful malignity, and, owing to the poor not feeling the importance of early attention to its premonitory symptoms, and not thinking it cholera until they were in collapse, nearly all the first cases proved fatal. The Board of Health issued placards warning the public of the approach of the pestilence; directing what to use and what to avoid; also stating that no one need be afraid to afford every assistance in their power to their neighbours, as the disease was not contagious; and also recommending the treatment of the affected in their own houses, or in hospitals among other patients. To carry out the latter part of their recommendation, many of the cholera cases were removed to the workhouse fever hospital, where cholera had not previously existed, but in which it has from that period till now proved highly fatal to the fever patients, the greater number of whom have been seized, either prior to or during convalescence, and, with one exception, all carried off. A few weeks ago, four patients, members of one family, labouring under maculated typhus fever, were admitted into the fever hospital: three were seized with cholera, and died. Six of another family were received: two have died of cholera, and the remainder still exposed will perhaps sink under a disease which did not exist in the locality from which they came."

I have carefully inquired among my brethren in Dublin, respecting their opinions as to the amount of danger which medical men are exposed to in their attendance on cholera patients; and they mostly concur in representing the result of their experience to be, that a medical man, who is much employed about such patients, seldom escapes an attack. It is true, as a body, we have much reason to be thankful, that in Dublin not more than four or five deaths took place among the medical profession. But in explanation of this comparatively light mortality, it is necessary to observe that it was altogether owing to the knowledge medical men have of the

premonitory symptoms which denote the very commencement of cholera, and to the care they take, instantly, to meet such symptoms with appropriate remedies. I, myself, was twice attacked with decided premonitory symptoms. I felt myself ailing, fatigued, and annoyed by flatulence, rumbling, and dyspepsia. These symptoms denoted the preparatory stage of incubation, and were followed by premonitory diarrhœa, and in each case I had some difficulty in arresting its progress.

The same symptoms, with a like fortunate result, were observed by a great number of physicians, surgeons, and apothecaries in this city.

It is quite true that the greatest care will not always be sufficient to preserve life, for in some cases the attack of cholera is so sudden and unexpected as to leave no room for either precaution or treatment. Such instances are, however, in reality, very rare, although the number of persons reported to be thus carried off is considerable, for a more accurate investigation will generally lead to the discovery of premonitory diarrhœa, often so slight as scarcely to have attracted the attention of the patient.

While on the subject of cholera hospitals, it is necessary to observe, that the officers appointed by the Board of Guardians in Dublin, for the relief of the poor, were, during the whole of the epidemic, extremely active, and used every means to arrest its progress, which the funds at their disposal allowed. Among the rest, they rented private houses in various parts of the town, which were fitted up for cholera hospitals. It is worthy of notice, that the poor did not avail themselves of these establishments at all in the same proportion as in 1832 and 1834, when large buildings, such as the Grangegorman Penitentiary, and the Depôt in Townsend-street, were taken and prepared for the reception of cholera patients. In the furnishing of these buildings, considerable sums of money were expended by the Government, which gave the hospitals the appearance of being well and comfortably prepared. This had

an evident effect upon the minds of the poor, and won their confidence to such a degree, that they flocked in great numbers to these establishments for relief. This was by no means the case in the epidemic of 1849, during which it was extremely difficult to get people to bring their friends suffering from the disease to hospital. These places, which had not externally a very attractive appearance, consequently fell into disfavour in the minds of the people, who unwisely preferred almost certain death at home, in their own crowded and miserable rooms, to the chance of being cured in hospital. I knew myself an instance, in which several persons inhabited one small apartment near such an hospital, and who died in succession of cholera, each individual being apparently more alarmed at the prospect of a cholera hospital than even death itself.

It is worthy of remark, that some of the districts in Dublin which suffered most during the visitation of 1832, escaped almost unscathed in 1849. Church-street affords an example of this, and is quite a puzzle to those who account for the disease by lowness of situation, bad sewering, &c., &c.; for in all these respects Church-street and its vicinity deserve now, as well as then, an unenviable notoriety. The village of Castleknock is situated three miles from Dublin, in an elevated position, well drained, and built upon a dry limestone soil,—this village was unvisited by cholera in 1832 and 1834, but lost half its inhabitants in 1849. Such an occurrence, though explicable on the supposition of contagion having been introduced during one epidemic, but not during the others, cannot be accounted for on the want of drainage and sewerage hypothesis. It has been asserted by the Board of Health in England, that cholera affects certain unhealthy localities only, and that such places suffered most severely from its ravages, as were either badly drained, had narrow streets, or contained a pauper and consequently an ill-fed population. The course which the epidemic took on the occasion of its visit in 1849, presents so many

contradictions to this, that we are compelled to doubt both the accuracy of the assertion, and the correctness of the numerous conclusions deduced from it.

Thus we find that some of the healthiest localities in Ireland were sadly affected during the existence of the epidemic at this period; for instance, Parsonstown,—than which no town in Ireland is better drained, more cleanly, or more carefully sewered,—suffered severely, and yet its population, generally speaking, are much more comfortable than is usually found in this country, and the streets have an air of neatness and cheerfulness which reflects the highest credit upon the noble and justly celebrated lord of the soil, the Earl of Rosse. In truth, if the theory of the English and Irish Boards of Health was correct, a visitor to Parsonstown, relying upon such an hypothesis, might, without hesitation, calculate upon its complete freedom from the scourge of cholera. But, as I have already showed, such an anticipation would have been anything but verified in the result; for the inhabitants of this very town fell victims to the disease in a far greater proportion than other places in Ireland, which, according to the Boards I have mentioned, might have been expected to suffer to a greater extent, from the fact of their containing all the causes and elements supposed to be calculated to generate and nourish this epidemic.

The village of Bray, in the county of Wicklow, affords an example equally strong, being interestingly situated on the side of a granite mountain, and its single street extending far up the hill. Its position is celebrated as being particularly healthy, and is much resorted to by invalids from Dublin. Here, at all events, no want of proper drainage could possibly exist, and here there is no numerous pauper and filthy population; yet this village was awfully scourged by the cholera in 1849, while adjacent villages, such as Enniskerry, Loughlinstown, and Cabinteely, situated in lower, more confined, and much moister positions, escaped nearly altogether.

Carlow is an extremely well-situated town, and built upon a very dry soil, the same may be said of Bagnalstown; and yet the respective populations of these places were decimated in 1849 by cholera, while many towns and villages notoriously impoverished and unhealthy escaped during the existence of the same epidemic.

My friends, Doctors Farr and Sim, have argued most ingeniously upon the facts they have observed in England; but I think, that the foregoing instances prove that they very incautiously argued upon these facts, and too hastily ventured upon generalization, which a more extended observation completely refutes.

In a former paper I have shown, that if we take a world-wide view of the progress of cholera, we shall find that its prevalence is entirely unconnected with any physical peculiarities either of soil, temperature, climate, water, air, or food; and certainly the history of the late epidemic verifies the conclusions I there drew. The history of the disease in Dublin is alone sufficient to dispose of the favourite conclusions of those who connect the usual sanitary conditions of towns and countries with the appearance of the cholera. Of these I have already spoken. I may now add, that there was very little cholera in Patrick-street and the adjoining parts, although these districts are the most densely inhabited, the worst drained, and the most filthy to be found in the whole city.

In a letter received from Dr. Kelly of Drogheda, he gives the following particulars relative to the village of Duleek, which I think are well calculated to elucidate the subject under discussion:

"Duleek is distant about four miles from Drogheda, situated in low, swampy ground, and contains 1600 inhabitants of the very lowest class, who are without employment nearly all the year, except during the harvest season, and are consequently without food, fire, or clothing, and live in a most shocking state of filth and wretchedness; nevertheless, but two cases of cholera

occurred during the entire period of the disease. The foregoing statement has impressed me with the opinion that cholera is a disease *sui generis*, and totally uninfluenced by such agents."

The villages of Sallynoggins, near Kingstown, six miles from Dublin, and Goatstown, near Dundrum, four miles from Dublin, have both suffered much from cholera. In the former more than fifty individuals died, being, I believe, about one-fourth of the entire population. These villages are situated in most healthy localities, at a considerable elevation, and built upon a very dry soil. In neither does there appear to be the slightest want of drainage, nor the existence of any of those nuisances to which public opinion, misdirected by Boards of Health, is accustomed to attribute the origin of cholera. Sallynoggins in particular, occupying the declivity of a hill, the subjacent rock of which is granite, suffers rather from a want than a superabundance of water; and at the time of the invasion of cholera, the soil was parched by a long-continued drought.

The following letter, from my kinsman and former pupil, Dr. Graves of Rush, bears so directly on the question at issue between me and the central Board of Health of Ireland, that I have thought it well to print it *in extenso:*

"As you have ever been the advocate of the contagiousness of cholera, and as I have had much opportunity of observing the progress of this disease, and its mode of propagation, I am sure that any facts bearing upon this question will be gladly received by you. I purpose, therefore, to let you have a brief history of what would seem to me to bear conclusive evidence, that cholera, once it has taken up its abode in a locality, is both infectious and contagious.

"You are, doubtless, aware that Rush (the seat of my labours) suffered severely from the late epidemic, 824 individuals of all ages and sexes having been attacked, and 176 having died, and this out of a population not exceeding 2500. The village of Rush extends for about one mile along the coast, east

and west, being little elevated above the sea, the soil sandy, and for the most part dry. The population may be divided into two classes, one half deriving a scanty and precarious subsistence by fishing; the other half an agricultural class of labourers and small landholders. The fishing class is confessedly the poorest, and for the most part live in wretched and filthy dwellings in the east end of the village. Indeed I may here remark that the houses in Rush are of the worst description, constructed without any regard to ventilation, and seldom containing more than two small compartments, in which are congregated often as many as eight, and even, in some instances, ten individuals. There being no upper story, they all live on the ground floor, which is scooped out of the sand, and then lightly covered over with yellow clay; thus in rainy seasons becoming a fertile source of disease, from its extreme dampness. From this sketch of our village, you will not wonder that such numbers were attacked, more especially when I tell you that, when the disease arrived at Rush, it found us unprovided with an hospital; thus, in the houses of the poor, rendering it impossible to separate the sick from the healthy.

"Before the cholera reached us, it prevailed at Swords, about six miles distant, which gave us time to make what were supposed to be the necessary preparations for its visitation. Whitewashing and cleansing were diligently had recourse to; all nuisances, such as dunghills and stagnant pools, which might be considered as dangerous to the public health, were removed; but, as I have just stated, we were found wanting in the greatest *essential*,—namely, good hospital accommodation; this, by a *false economy*, we were prevented from enjoying until the disease should actually appear amongst us, which it did on the 14th of August, 1849, in a very aggravated form, and in the most airy and cleanly part of the village. The first case was that of a small landholder, and the village nailer, a man in comfortable circumstances, residing about the middle of the main street; he was attacked on his way from the Dublin mar-

ket, and died in about eight hours from the first invasion of the disease. Six days elapsed without any other case occurring, when suddenly this man's wife, who attended him most assiduously, was carried off, after a few hours' illness. One of their children was the next case; it recovered with great difficulty. The fourth case was that of a neighbouring woman who volunteered her services as nursetender to this family; she narrowly escaped. A circumstance of rather a remarkable nature now occurred in connexion with the fifth case, a boy of sixteen years of age. This nursetender, at the period when she offered her services to the nailer's family, whose house was exactly opposite the one in which this boy lived, was engaged attending upon him in typhus fever, from which he was then slowly convalescing, so that, until she was herself struck down, her attention was divided between him and her cholera patients. This boy, who was still confined to his bed, was attacked with cholera, and from his weakened state easily fell a victim to it. Now, whether this nursetender conveyed the contagion to him in her clothes, I will not take upon me to decide; but the facts would seem to favour such a view. A brother of this boy next fell a victim; so that up to this period, that is, ten days from the date of its first appearance, we had the disease confined to two houses in close proximity, six of the inmates having been attacked. The disease now began to extend rapidly westward, appearing in several localities almost at the same time, seldom leaving a house without attacking several of the inhabitants, and, in some instances, sweeping off whole families. When it appeared in a locality it never left it without attacking almost every house in its immediate neighbourhood; and this without reference to drainage, cleanliness, or ventilation: clean houses in the vicinity of dirty ones suffered in like manner. In fact, so evident had the signs of contagion now become, even to *non-medical* minds, that friends and relatives fled from their plague-stricken houses, leaving the sick and dying to the mercy of any one who might have sufficient courage and cha-

rity to administer to them in their hour of need. From the 14th of August to the 10th of September, the disease continued to spread westward from the house first attacked, no case up to this time having occurred east of it, though in the east end of the village reside the fishing class, remarkable for their poverty and want of cleanliness,—a class that, reasoning *a priori*, you would say was most likely to suffer from an epidemic such as cholera. On this day, the 10th, a woman remarkable for her intemperate habits was seized with the disease, and died; her husband next fell a victim, and from this time it continued to progress eastward, as it did at first westward, but not with the same violence. Cases became more amenable to treatment; and from the fact of our hospital being now available, and separation of the sick from the healthy being had recourse to speedily, the rapid progress of the disease in families was checked. Of 105 families, some one member of which was admitted into hospital, forty escaped with only the admitted member being attacked, and in these instances the separation was had recourse to immediately. Amongst the remaining sixty-five the disease continued to spread, notwithstanding the separation, but in many of these separation was not resorted to immediately. Another remarkable instance, in proof of the contagious nature of cholera, occurred at the Balrothery Union Workhouse, about four miles distant from Rush. No case of cholera had occurred in the house, nor was the disease prevailing in the vicinity, when some cases were admitted into the workhouse hospital from the district of Swords, which was six miles off. In a few days after cholera broke out amongst the paupers with violence; owing, however, to the judicious arrangements of Doctor Adrian, the house physician, in cutting off all communication between the paupers and the cholera hospital, the disease soon disappeared. Of four men whom we had employed to bury the dead, three were attacked with cholera, two of them recovering with difficulty. Of six nurses employed, four contracted the disease, and two died.

"Let me now recapitulate the facts which have induced me to believe that cholera is contagious:

"1st, From its progressing by attacking in detail those who had been in attendance upon or in close proximity to the diseased. 2ndly, From its spreading from house to house in any locality where it appeared, rarely entering a house without attacking several of the inmates, the mortality being greatest when numbers were congregated together in small and ill-ventilated abodes. 3rdly, From the negative information furnished by the fact of the disease having attacked only one member of forty families, where separation was had recourse to early; such a result, in families where no separation took place, being the exception, not the rule. Lastly, from the fact of cholera having made its appearance at the workhouse immediately after the admission of cholera patients from a distant part of the Union, no case having previously occurred in the house or its vicinity."

In a former paper I dwelt upon the proof of the contagiousness of cholera, derived from the fact of its spreading so often among the crew and passengers of ships, in which the disease once appeared. Since that paper was published several instances of this nature have occurred, and that under circumstances calculated to negative the various hypotheses accounting for the spread of the disease advocated by many writers, and by the Boards of Health in London and Dublin. It is well known that the packet ships, which ply between Liverpool and New York, and which are usually called Liners, are remarkable for the excellent arrangement of everything on board. In such vessels it would be impossible for cholera to commit ravages to any extent, if the disease be produced solely by emanations from sewers, or by vitiated states of atmosphere arising from want of ventilation and overcrowding.

In these ships such circumstances are never allowed to exist; and consequently cholera, if the usual hypothesis be correct, should be extremely rare among the inmates. We

find it, nevertheless, announced in the London Medical Gazette of September 7, 1849, that the packet ship "Oxford," arrived at New York, lost twenty-one by the disease; and the packet ship "Sheridan," thirty-one. Such an occurrence is easily explained on the principle of contagion, but not by any of the hypotheses which attribute the dissemination of the disease either to impurity of water, malarious emanations, atmospheric changes, &c. &c.

Subjoined are instances of deaths from cholera occurring on board the regular steam packets plying between Liverpool and New York, all of which are vessels remarkable for their superior accommodation and cleanliness, and for the possession of every convenience which can insure to the passengers by them the enjoyment of health and comfort.

The first is that of the "Columbus," which arrived at New York on the 8th October, 1849, from Liverpool, having had no less than thirty-six deaths among the passengers from cholera during the voyage.

The Evening Mail of the 27th October, 1849, furnishes me with others, and mentions that the deaths of late on board these vessels have considerably increased. The last packet which sailed previously to the above date had nineteen deaths, and the last but one fifteen deaths, all from cholera.

I am glad to find that Dr. James Copland, the author of the celebrated Dictionary of Practical Medicine, entirely agrees with me, both as to the contagiousness of cholera, and the inadequacy of the measures adopted by the Boards of Health with the view of arresting its progress. In a letter addressed to the Editor of the Medical Gazette, and published in the number of that periodical for September 28, 1849, the following observations occur:—"The Board of Health, which was formed in 1831, consisted of three very experienced physicians,—of two who had investigated very closely the nature of the choleric pestilence, the third had had the greatest experience of any man living in other pestilences. This Board wisely

endeavoured to prevent the spread of choleric pestilence, by removing those of the poor who were attacked to cholera hospitals, in order that they might not be the sources of infection in their several residences and localities, and by other means calculated to prevent infectious emanations from the sick. The members of this Board, experienced and practical physicians, acted on the conviction of the infectious and specific nature of choleric pestilence, and did all they could to limit its spread by acting on this conviction. The results were, 1st, that the spread of the pestilence was then comparatively limited; 2nd, that many populous towns and districts escaped altogether; and, 3rd, that the disease entirely disappeared for nearly seventeen years. The present so-called, or popularly called Board of Health, but legally denominated Board of Works (see the Earl of Carlisle's letter), take opposite views of the nature of the disease, act accordingly, and allow a malady, which judicious measures might have arrested altogether at an early stage of its diffusion, to become destructive to an extent far beyond the history of modern pestilence, and, moreover, recklessly run the risk of domiciliating the disease in this country, as it has been in India since 1817."

The manner in which the cholera increased immediately after the Queen's visit to Dublin was very remarkable, and, in my mind, strongly corroborative of my opinion respecting its contagious nature. Indeed, upon observing the immense crowds that poured into the city from all parts of Ireland, for the purpose of witnessing Her Majesty's entry into the Irish metropolis, I mentioned to many of my friends the fears I entertained, that the disease would be more widely spread, and considerably aggravated, during each day of Her Majesty's sojourn. These fears were much heightened, when I beheld the crowds of persons, of all classes, who sallied forth—too many of them from abodes of misery—to view the magnificent and brilliant appearance of the city on the evening of its illumination, and who thronged every place or thoroughfare, both

in the city, Kingstown, and elsewhere, in which Her Majesty was expected to appear. Relatives of persons sick of cholera, those convalescent from premonitory diarrhœa, cholera porters, nursetenders, and others connected with the hospitals, unable to restrain their curiosity, were everywhere mixed up, and brought into the closest contact with those who had been previously healthy. At Kingstown, the attraction of the royal squadron brought visitors from all quarters; and as cholera had previously existed both in Kingstown and the adjacent villages, the same causes as in the city were likely to give rise to a more extensive dissemination of the disease. The fears expressed were but too soon realized, for the disease spread far and wide, in Dublin, Kingstown, and in many districts of the country before unaffected, in the week following Her Majesty's embarkation. As a proof of the danger of bringing crowds together during the existence of a contagious disease, I need only refer to the report of the plague of Milan in 1630, translated and abridged by Michael Donovan, Esq., from the Italian of Manzoni, and published in this Journal in August, 1849(*a*).

It is worthy of being recorded, that a terrific thunder storm occurred in Dublin, on Saturday, the 1st of September, 1849. It commenced about 3 o'clock in the afternoon; very frequent and violent electric explosions were followed by torrents of rain, after which the sky cleared about 5 o'clock in the evening. But at 7 o'clock it again became overcast, and a continued deluge of rain poured down from that hour until midnight, during which the rapid succession of the thunderpeals, together with the appalling flashing of the lightning, fearfully recalled to the minds of those who had resided within the tropics, the recollection of one of the awful convulsions of nature usual in those regions. I looked forward with much interest to the effect of this storm on the state of the public health, and was anxious to see whether the common idea, that

(*a*) Vol. viii. p. 225.

such an event would purify the atmosphere, and diminish the intensity of the epidemic, would in this instance be verified. But no such desired result followed; for the cholera rapidly increased after that day, and reached its maximum in the following week.

In concluding this paper I beg leave to observe, that my arguments and facts are chiefly applicable to countries where the cholera does not exist as a permanent endemic disease, and are not of the same force when the question relates to parts of the globe, such as Hindostan, where the disease originated, and is constantly present. The progress of cholera in India presents a much more complicated problem, in whose solution this important element ought never be lost sight of(*a*).

(*a*) It will be observed that in the foregoing pages I have derived my arguments altogether from facts that occurred in Ireland during the late epidemic; in a future paper I purpose bringing forward additional proofs derived from its dissemination throughout Great Britain and other parts of the world; but I cannot forbear at present from quoting the following apposite remarks which I have just met with, in a paper by Dr. Clark on the cholera as it appeared in Newark, New Jersey, and with which he concludes his observations: "Let us look at our experience in relation to the Alms House. July 15th, 1832, Mrs. M'Laughlin, being attacked with cholera, was removed to the Alms House, in which no symptoms of the disease had appeared. July 16th she died; also her husband, who the same day had been removed, apparently well, from the infected house. On the 19th the disease attacked the inmates with its usual virulence, and deaths followed for some weeks. Overlooking or forgetting that sad experience, or, probably, for the want of a 'Board of Health,' whose duty it would have been to remember a fact of such importance, on the 16th of July, 1849, a man was found upon the road between Newark and New York, while in an advanced stage of cholera, and taken to the Alms House. The result was, of course, the same as if a match had been thrown into a powder mill, or a flaming firebrand placed among a heap of combustibles. The infection took, and thirty-eight deaths followed, including the worthy superintendent. Surely those who maintain that typhus fever is contagious must also put cholera in the same category." —*New York Journal of Medicine*, March, 1850.

Art. IX.—*Case of Pelvic Tumour obstructing Labour, in which the Cæsarean Section was proposed; with Observations.* By Robert Shekleton, M.D., F.R.C.S., one of the Presidents of the Obstetrical Society, and Master of the Lying-in Hospital.

[Read before the Obstetrical Society, Session 1849–50.]

The following case, to which the attention of the Obstetrical Society was drawn at its first winter meeting of last session, was deemed of such peculiar interest, involving as it did, in its history and results, a question of such practical importance that its publication in the pages of this Journal has been since solicited. In the annals of obstetric practice there is, perhaps, not one that was more satisfactorily recorded by the different gentlemen under whose care the patient had fallen in her various confinements, in this institution; and the information thus obtained, and transmitted to each succeeding attendant, afforded the most useful data on which to ground the treatment with the best prospect of success. Its fatal termination enabled me at the time to lay before the Society the cause of all the difficulties that each had to encounter; but the annexed engraving will delineate pretty accurately the size and position of the tumour, which is now preserved in the Museum of the Lying-in Hospital.

At our ordinary visit on the morning of the 20th July, 1849, our attention was called to the case of Anne Parsons, who had been admitted at 4, A.M. The gentleman on duty reported that he could not discover any presentation, owing to a compact, firm substance filling up the cavity of the pelvis; and on examination this statement was confirmed, and the woman was then interrogated as to her age, number of children, progress of former labours, &c. We elicited from her, rather reluctantly, that she had been delivered five times in this hospital; and it was ascertained from the records of the house that

her first child was dead born, her second was delivered by the crotchet, the third was acephalous, the fourth was extracted by the crotchet in December, 1841, and her fifth by the same means in January, 1846, three years and a half ago. The observation appended to her name in the year 1841 was:—"There is a large tumour of bony consistence growing from the back part of the pelvis, filling up the cavity all to a small space, through which the child was, with much difficulty, extracted." In 1846 the pelvic tumour was described as being of such magnitude and density as to convey the same sensation to the finger of the examiners as the fœtal head, after it had cleared the os uteri; and Dr. Johnson (then Master) was of opinion that it had enlarged considerably since her last confinement in 1841. The details of the delivery of 1846 resemble so closely the history I have to give of the present one, that I shall merely now state that the head was perforated, after a labour of fourteen hours, with no great difficulty; but it required two hours of active, unremitting exertion of three gentlemen to drag it through the pelvis; nor was this effected till after the entire calvarium had been removed, so that, when the extraction was finally accomplished, nothing remained of the head but the face and base of the skull. Notwithstanding the prolonged pain and suffering she underwent on that occasion, the pulse never flagged during the operation, and her convalescence proceeded so favourably, that she was able to return home on the ninth day.

This history put us in possession of all the particulars of her last and former confinements, and awakened us to a sense of the dangers of her present position. She was about thirty-five years of age, strong and healthy. She stated that she had been in labour since 11 P.M. the previous evening, and that there had been some dribbling of the waters before her admission. On examination at 9 A.M., a large, unyielding tumour was found to occupy the whole cavity of the pelvis, with the exception of a space immediately behind the pubis, which barely admitted the passage of one finger between it and the

tumour, while to the right this space was somewhat larger, owing to the position of the tumour being more to the left side. Neither the os uteri nor the presentation could be ascertained. On examination of the abdomen the uterus appeared to lie obliquely, with its fundus inclined to the left hypochondrium, and its cervix pushed into the right iliac fossa, where the head of the child could be felt, hard, round, and slightly moveable, resembling very much a tumour, for which, indeed, it was for a time mistaken. The fœtal heart was distinctly audible about one inch below the umbilicus, in a line towards the centre of Poupart's ligament, and the placental soufflet was detected near the fundus.

On weighing maturely in my own mind all the circumstances of the past history and present state of this case, namely, the extreme straitness of the passage through which the child had to pass, even in the most mutilated condition, as proved by the immense amount of difficulty that was experienced in her last confinement, and which might naturally be expected to be augmented by an increase of growth in the morbid structure since that time,—the strength and vigour of the child, as evinced by the stethoscope, and the certainty of its being the fifth sacrificed to the mother's chance of recovery,—the woman's naturally healthy constitution, guaranteed not only by her present state, but, to a certain extent, by her wonderfully rapid recovery on the last occasion,—the short time she was in labour, and the uterine pains being as yet neither very vigorous nor distressing, with a tranquil state of mind, great fortitude, and a pulse but 74,—all these circumstances, I say, affording presumptive evidence that this was a case in which the Cæsarean section might be performed most legitimately, and with the greatest prospect of success,—I summoned a consultation for 12 o'clock, of the ex-masters of the hospital, Doctors Collins, Evory Kennedy, and Johnson, and Sir Philip Crampton, its surgeon, and in the interim prepared a small ward well

adapted for the operation, and had everything requisite for its performance ready before the hour appointed.

Dr. Collins' engagements obliged him to come at 11 o'clock, and after a minute examination he thought he could feel the os uteri. At 12 the other gentlemen arrived. Dr. Kennedy, after a lengthened manipulation, discovered the os uteri, which by this time had become dilated, as well as he could judge, to the extent of half-a-crown, with the head resting on the crest of the pubis. Dr. Johnson thought the tumour had not increased in size since the woman was last under his care. Sir Philip Crampton examined, but expressed his unwillingness to give an opinion in a case so purely obstetric. It was then arranged that, as Dr. Collins could not attend till half-past 3, P. M., an adjournment to that hour should take place, the woman in the mean time to be kept quiet, and have an emollient enema.

At half-past 3 the same gentlemen met, with the exception of Dr. Johnson, accompanied by Mr. Cusack, Professor Harrison, Mr. Hamilton, Drs. M'Clintock, Hardy, Denham, &c. The pains since morning had become strong and frequent, recurring every three or four minutes; the pulse had risen to 100, and was full. On examination now it was ascertained that a small segment of the head could with some difficulty be reached, just sufficient to enable the perforator to be used; and the majority of the accoucheurs considering the possibility of perforation, and the great success that had attended the former deliveries as regarded herself, were of opinion that the head should be lessened, and time given to try how far the uterine efforts (which were now vigorous) might mould the collapsed bones to the space through which they had to pass. Feeling the great responsibility that would attach to me individually, if I acted in accordance with my own views of the case, in opposition to the judgment of such sound and experienced practitioners, and failed in an operation which they

deemed ineligible, I at once determined on yielding to their decision, and undertook the task of carrying it into effect. Accordingly, I introduced the perforator, and made, as far as the space would allow the handles to diverge, the ordinary crucial incision. Judging that the crotchet would enable me to use more freedom in breaking up the cerebral mass, I substituted it for the perforator, and in a short time evacuated a large portion of the contents of the cranium. Five o'clock having now arrived, we adjourned till 7, when Drs. M'Clintock and Denham, who assisted Dr. Johnson at the last delivery, and knew all the particulars of the case, most kindly afforded me their valuable aid, in addition to Dr. Hardy and Drs. Sibthorpe and Johnston, my own assistants.

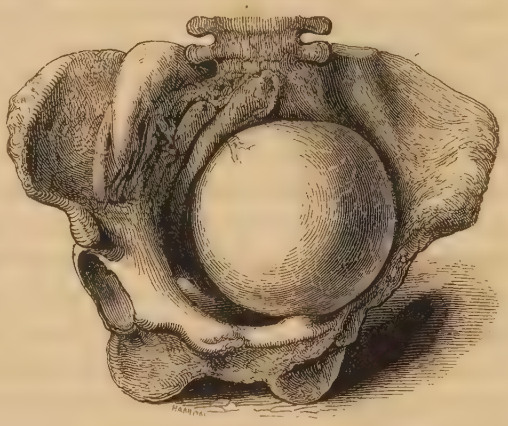
On examination now I found to my surprise and regret that the left arm of the child had fallen into the narrow space in the vagina, and no effort of mine could return it, nor could a finger be passed up at the side of it to ascertain the position of the head; it was, therefore, evident that the case had become seriously complicated by this untoward change of presentation, and that no alternative was left but to separate the arm from the body, eviscerate the child, and deliver as best we could with the crotchet. Accordingly the instrument was fixed in the axilla, and such traction employed, that at length the arm gave way, bringing with it the scapula of that side. By degrees the whole of the thoracic viscera, the ribs, and the contents of the abdomen, were torn away, and finally the spine was unintentionally divided in the middle, and many of the vertebræ were extracted separately. After various attempts and failures two crotchets were at length firmly fixed in the fœtal pelvis, and, by the united alternate efforts of myself and friends, we at length succeeded in dragging the lower extremities through the os externum, and with them the right arm, attached by a strip of integument and torn muscles. In this stage of the operation the funis got entangled in the crotchet, and the placenta came away with it in our efforts to extract the extre-

mities, but no hemorrhage ensued. A most perplexing and difficult operation at all times, but especially so in the present instance, still remained to be performed, namely, the extraction of the child's head. In despair of finding any means by which to fix it at the brim, and grip it by the crotchet, I introduced my fingers into the vagina, and there, to my surprise and satisfaction, found the stump of the dorsal vertebræ, with small portions of ribs attached, which I instantly secured, and firmly held till the crotchet was fixed at the back of the ear externally, and the head extracted by Dr. Denham with extreme difficulty, and in a much more flattened form than the engraving here represents. Thus ended the mechanical efforts by which delivery was at length effected, which occupied upwards of three hours at our last sitting, and which exhausted the strength and depressed the spirits of myself and friends on the occasion. And here I cannot but express how sensibly I felt, with an experienced author, "that the whole difficulty of delivering a child through so contracted a space can scarcely be conceived by one who has not been engaged in such an operation himself. The constant and perplexing apprehension of injuring the mother, either with the instruments employed, or with the sharp and ragged edges of the bones, involves the operator in the most painful and unremittent attention and watchfulness, which alone, when long continued under compulsion, is a real torture. The confusion also in the parts arising from the ragged remains of the cranium, or other portions of the child, is likewise a source of great embarrassment." But to return. It were well if the painful part of the scene had here terminated, and that we could, with even a gleam of hope, have looked forward to so happy a termination as resulted from

the last delivery; but such was not to be. Till within about twenty minutes of the final step in the operation, the pains appeared strong and energetic, aiding our efforts at delivery, but now a great change was manifest in the poor sufferer; vomiting set in; the pulse became weak and rapid; brandy and other stimulants were freely administered, without effect; the surface was bedewed with cold perspiration; she ceased to complain, except by subdued moans and sighs; in short, death was depicted in her countenance; and in ten minutes after the head was extracted, Anne Parsons breathed her last.

Autopsy.—Eleven hours after the scene thus detailed an examination of the body was made, and the causes of delay and death were clearly and satisfactorily portrayed. The uterus was lying at the right side of the abdomen, with its fundus reaching a little above the umbilicus, giving it the appearance of unusual bulk, but this was evidently owing to the entire organ being in the abdomen, instead of its lower third having sunk into the pelvic cavity, as in the ordinary state, immediately after parturition. The structure of the body was firm and thick, but towards the cervix and os it appeared flattened and much thinned in its structure, and was projected forwards by the fundus of the tumour which occupied the left iliac fossa. The Fallopian tubes and ovaries at either side were healthy. The bladder was small and closely contracted. The peritoneal covering of the anterior abdominal parietes was much injected; there were, however, no other signs of inflammation, if this could properly be called one. On lifting the fundus of the uterus forwards, a quantity of blood, with small portions of fœtal brain, was seen. This, no doubt, escaped from the perforation in the cranium in the first stage of the delivery, and ultimately made its way into the cavity of the peritoneum through an extensive laceration which was now discovered. This laceration occupied the posterior wall of the uterus, was about five inches long, running obliquely from the right downwards through the cervix uteri and upper part of the vagina, involv-

ing the vagina, however, in the largest portion of its extent. Blood was extravasated between the peritoneum and posterior abdominal walls. The rent in the peritoneum covering the uterus was rather more extensive than that of the structure of the uterus itself, from which, to some extent, the peritoneal tunic was separated by coagula. Thus far as concerns the immediate cause of death, but the tumour, the primary cause of all, remains to be noticed. The cast which the engraving represents was unfortunately not taken for some days after death, when the tumour had shrunk in its dimensions, neither reaching so high nor so far into the right side of the pelvis as it did during its vitality. It was a large, firm tumour, nearly filling up the entire aperture of the true pelvis, except a very small space on the right side, which space was evidently much enlarged by the great pressure to which the tumour was so long subjected during the operation. It was of a pyriform shape, and extended from near the point of the coccyx to the superior brim of the false pelvis. It was found to be immoveably fixed in its situation, being firmly united to the periosteum (except at its fundus and superior part of its anterior wall) and to some of the left sacral nerves, one of which appeared to enter into, and to be lost in its substance. A portion of the anterior wall of the sacrum had been absorbed, and a part of the tumour had extended into the sacral canal, and lay anterior to the cauda equina. The rectum was pushed completely out of its natural position, and lay in the right side of the pelvis, free from pres-



sure. On cutting into the tumour directly from above downwards, it was found to be very fibrous and solid throughout, except at its fundus, where there was a small cyst, lined by a fine vascular membrane, and containing about four drachms of a reddish serous-looking fluid. This cyst, as well as a smaller one, containing about one drachm, near its apex, was not discovered till after death; every part of the tumour within reach feeling so firm and resisting to the touch, that it was thought by all to be of bony origin and structure.

My chief object in bringing this case before the Society was to elicit an opinion as to the propriety of having recourse to the Cæsarean section, in cases similarly circumstanced with the one I have just related. Fortunately for mankind, they are few and far between in the practice of any one individual; but it were well if men's minds were prepared for such emergencies when they do encounter them, and that they could feel they have the sanction of the profession for performing the operation, when, humanly judging, it holds out the best prospect of the preservation of life to one, if not both of the parties interested. It is to be regretted that the black catalogue of unsuccess that unfortunately attended the operation for many years had so enslaved men's energies and judgment, that they dreaded to undertake the performance of it, for fear of adding to the melancholy list; and to the present day even, many are so wedded to early impressions, that they still look upon it as sealing the death-warrant of an unfortunate patient, and the perforator and crotchet are preferred.

Of late years, however, cases of recovery have multiplied, and men are beginning to inquire into the causes of former mortality, and to be disposed to believe that, if the operation be undertaken early, on a patient in good health, and *before* symptoms of constitutional disturbance set in, if it be dexterously performed, and the after-treatment be conducted with judgment, a fairer prospect of success may be anticipated than the annals of former years have transmitted to us.

If it were permitted to finite man to foresee the results of the practice pursued in the treatment of many of the diseases that "flesh is heir to," there is no one, I am sure, amongst us who would not at times (if granted the opportunity) adopt a different course from that which he had individually found to be so unsuccessful; and for myself I have to regret that in this instance, as well as in another equally unfortunate, which I read to the Society(*a*), I was not endowed with the faculty of thus discriminating unforeseen results; for assuredly, if I had, both these patients would have been submitted to the surgeon's knife, and I may venture to affirm now, with almost certain preservation of life to the children, and a better chance of recovery to the mothers, than the result in these instances unfortunately proved.

(*a*) This was a case of perfect occlusion of the vagina, the result of a former delivery, occurring in a healthy young woman's second pregnancy, the first being eight years before. On making an examination at the time of labour, the finger was arrested, about one inch within the vulva, by a firm, pursed-up, cartilaginous-feeling septum, composed of strong fibrous bands, as if a ligature had been tightly tied round the vagina, and neither bougie nor probe could detect the smallest opening. The child was alive and vigorous. Labour went on for twelve hours before a small opening was discovered, through which a bougie was passed, and then the blades of a long dressing forceps. By diverging the handles of the forceps the opening was gradually, but painfully, enlarged, sufficiently to admit the fore-finger to the second joint, when the os uteri was found dilated and the head presenting. Three hours after this, the labour pains, though strong and frequent, made no impression on the opening, which remained hard, cartilaginous, and cylindrical, with the head resting above it. In two hours more, no advance being made, nor sign of further dilatation, the edges of the opening were carefully and freely incised by a button bistoury till three fingers were admitted, when the head descended, and a scalp tumour gradually filled the space. There it remained, however, till the violence of the pains threatened rupture of the uterus, when the head was lessened and allowed time to collapse. After three hours more of fruitless patience, the pulse becoming quick and the belly tender, with fixed acute pain behind the pubis, the crotchet was introduced, and, with very great difficulty, the head extracted; but rupture of the uterus was the consequence, and she died in thirty-six hours after delivery. A rent, one inch and a half long, corresponding to the fixed pain, was found at the junction of the os uteri and vagina.

In the certainty, however, that it will not fall to the lot of man to be blessed with so precious a gift, it is our bounden duty to watch attentively the reports of cases of Cæsarean section, and to hail with satisfaction any improvement or suggestion that would tend to lessen the mortality that has so long attended the operation.

Since this case occurred in our hospital, a pamphlet was sent to me by Dr. Radford, of Manchester, detailing a successful case of Cæsarean section, under circumstances far less promising than those of either of the cases now related. The woman was in slight labour three days, the membranes ruptured, but the waters only partially evacuated; pulse 120; great deformity of the pelvis; widest diameter at the brim did not exceed one inch and a half. She had been delivered naturally of her first four children, when she was attacked with mollities ossium, which caused her present deformity. Both she and her child were saved. Dr. Radford relates another case treated with equal success. Of five women he saw operated upon, two and their two children survived. To show the ill effects of delay, he states that one of the three woman who died was thirty-six hours in labour; her pulse was 150; there was great tenderness of the belly, thirst, furred tongue, &c., before the operation; with a dead child. Another was in labour twenty-two hours with membranes ruptured, pulse 130, great tenderness of belly, thirst, furred tongue, &c.; child alive, but destroyed by being seized round the neck by the incised uterus. The third was fifty-three hours in labour; membranes ruptured fifty hours; abdomen tender; pulse 130; bowels confined; frequent vomiting; the intestines were found inflamed at the time of the operation, and there was a putrid child. Thus in these three fatal cases the cause of death may with justice be attributed more to the constitutional disturbance at the time of the operation than to the operation itself. If we are to give credit to the cases of success reported by many of the older continental writers,—some of whom, Roonhuysen for instance, who records the operation as

having been performed by a physician at Bruges seven times on his own wife, six of which she must have recovered; and Bartholin, who tells of a surgeon's wife at Paris, who had been five times the subject of it; and Roussett, who knew it to be six times performed on the same woman,—we must conclude, that the practitioners of Great Britain are mere babes in this branch of obstetric science compared to them. But, if true, we may in some measure account for their success, by the fact of their having had recourse to it, not as a matter of necessity, but of election, and therefore they operated earlier, and under more favourable circumstance, no doubt often unnecessarily, as we could show.

Dr. Churchill has collected from foreign authorities 371 cases of Cæsarean section, out of which 217 mothers recovered from the operation, and 154 died; but perhaps not all these from the operation itself. Out of 189 of these cases, where the results to the children were given, 139 were saved, and only 50 lost.

Now, out of fifty-two cases reported by British and American practitioners (as recorded in the second edition of Dr. Churchill's Practice of Midwifery), fourteen mothers only were saved, and thirty-eight died. This difference in mortality can only be accounted for by the delay in the operation, for most of the unsuccessful cases were days in labour:—one twelve days; others ten, eight, seven, three, &c.

I had written these observations thus far, when Dr. Meigs' work on "the Science and Art of Obstetrics" was placed in my hands; and on turning over its interesting pages, I happened to find the details of a case resembling in so many respects the one I have just described, that I could not avoid stating briefly the particulars to the Society. It is most minutely and interestingly recorded, and reminded me of the case of Elizabeth Sherwood, so graphically described by Dr. Osborne. It was a case of difficult labour, from deformed pelvis, occurring in a lady with her first child. The deformity of the upper strait of

the pelvis was so great (barely two inches in its antero-posterior diameter), that a living child could not possibly pass through it. A consultation was had, and it was agreed to wait some hours to see what effect uterine efforts might have upon its progress. At length it was decided that something should be done: the child was alive and vigorous. "The different methods of proceeding which have been proposed in similar cases were considered, namely, the division of the symphysis pubis, the Cæsarean section, and cephalotomy. The first was deemed inapplicable; the Cæsarean section was thought to be attended with so much risk to the mother as almost to be necessarily fatal, and some of the most distinguished medical men, including Dr. Physic, were decidedly opposed to its performance." "Under the weight of such authority, the Cæsarean section was abandoned, and it was concluded that the life of an imperfect being (still alive and vigorous) should be sacrificed to save the life of a wife and daughter, and that the operation should be immediately commenced by opening the child's head, breaking up the brain, and allowing some hours to elapse before attempting the extraction."

Dr. Meigs states that both he and Dr. Lukens were of opinion that the operation of cephalotomy, if not altogether incompetent to the delivery, would be attended with as much risk to the life of the mother as the Cæsarean section, for it appeared to them impossible that the cranium could be brought through the superior strait without the most violent exertions and great danger of lacerating the cervix uteri and vagina. Cephalotomy, however, was with great difficulty performed, and, like Elizabeth Sherwood, the patient recovered, and was about her usual occupations in three weeks. In two years after, this same patient again fell under Dr. Meigs' care at the full term, having resisted the advice both of himself and Dr. Dewees to allow premature delivery to be induced at the proper time, and now refusing to submit to the Cæsarean section, and again craniotomy was performed. He does not say how

long the operation lasted in this instance, but it was of many hours' duration in the first. It fell to Dr. Nancrede's lot to have the care of this lady in her third confinement; the breech presented, and delivery "per vias naturales" was deemed impossible; but she was safely delivered of a living child by means of the Cæsarean operation, performed by Professor Gibson. In a subsequent or fourth pregnancy, the same operation was a second time performed successfully by Dr. Gibson, in presence of Dr. Meigs and others, and both mother and child were again happily preserved. I have related this case as briefly as I could, merely to show that in this instance the Cæsarean section was twice happily performed as a matter of *election*, not of necessity, for it does not appear that the impediment to her two first deliveries had increased, but her children had to be sacrificed; and the lady, like unfortunate Anne Parsons, would, in all probability, have ultimately fallen a victim to the repeated employment of the perforator and crotchet.

I may be allowed to mention a well-known fact, that in cases of tumours obstructing the passage of the child through the pelvis, there may be a prospect, on being detected for the first time, of their receding into the cavity of the abdomen as the labour advances, as happened to Dr. Beatty in a case which he attended, and in which it was determined to have performed the Cæsarean section, if so fortunate an event had not taken place; and many similar cases are on record, as well as of tumours being sufficiently reduced in bulk, by puncturing, to admit of the passage of the child immediately afterwards.

In the present case, however, no such cheering prospect was in view, for repeated deliveries had proved the immobility of its attachment, and the solidity of its structure. In cases of occlusion of the vagina also, such as I have related in the note at page 296, and to which I could add another in my own practice, how often does it happen that rupture of the uterus takes place, even by the efforts that nature makes to overcome the obstacle. In one case that occurred in the practice of a former

Master, rupture took place while he held the scalpel in his hand, ready to divide the stricture; in another, where the face presented, the bands were divided carefully in two places, yet rupture was the result.

I shall not extend these observations further, but conclude by expressing my belief, that if all such cases of fatality, where the perforator and crotchet are employed, were fairly and truthfully reported to the profession (and they are not), they would soon lead to such practical statistics as must settle the question of the comparative value of the Cæsarean section and craniotomy in cases of extreme deformity from any cause.

Art. X.—*On Mortification of the lower Limbs, consequent on Valvular Disease of the Heart.* By John H. Power, M. D., Surgeon to Jervis-street Hospital, Lecturer on Surgery in the Carmichael School of Medicine, &c.

It occasionally becomes as much the painful duty of the physician or surgeon to place upon record those melancholy examples of disease where medical or surgical treatment can effect but little in relieving the sufferings of the patient, as those more pleasing instances, in which the agents employed have proved successful. I regret to state, that the case I am about to describe belongs to the former class. From the nature and duration of the primitive disease, as well as from the consecutive affection, there remained no hope of any permanent amelioration of the symptoms.

Amongst the various and numerous causes of gangrene of the lower extremities, valvular disease of the heart has been frequently observed; and as, in cases of this description, the gangrene is not merely a local affection, but symptomatic of permanent lesion of so vital an organ as the heart itself, the most serious termination must necessarily be apprehended. The following case will serve to illustrate the fact, and its relation may, at the same time, prove interesting in a patholo-

gical point of view. I am indebted to Mr. Dyas, the resident pupil of the hospital, for his attentive observations and record of it.

James Collon, aged about 42, a native of Cumberland, commander of a collier, was admitted into Jervis-street Hospital on the 19th of August, 1848. I saw him, in company with my friend Dr. Seymour, a few hours after his admission. Both his legs were in a state of gangrene; the toes of the right foot were completely sphacelated, of a dark brown colour, quite cold, and without sensation; the sphacelus had extended for some distance upwards towards the foot. The toes of the left foot were also sphacelated, but not to the same extent. In both legs the integument above the parts absolutely dead, was of a green colour; bullæ of various sizes, filled with a reddish and yellowish serum, were scattered over the surface, and both legs were cold. Immediately above this, the skin presented the blush of erysipelatous inflammation. The pain was intensely severe, and of a remittent character. The gangrene had extended more upon the left than upon the right leg; both were œdematous. There was pulsation in both femoral arteries, similar in character to the pulse at the wrist. The patient was able to move the foot upon the leg with tolerable freedom; from this he experienced no pain. Any pressure made upon the gangrenous parts produced no sensation whatsoever, whilst pressure on the red surface above this caused considerable pain. He appeared greatly exhausted, and felt extremely weak and low; the heart's action was rapid and tumultuous, its pulsation, as well as we could count, amounted to 140 in the minute; there was a prolonged bruit de soufflet which obscured the second sound of the heart; the pulse at the wrist was weak, feeble, and intermitting, and did not exceed 90 in the minute; dyspnœa distressing; orthopnœa. There was almost total loss of rest, and whenever he did doze, he was disturbed by severe twitchings of the muscles of the lower limbs. Nocturnal perspirations profuse. Tongue loaded, and,

when protruded, tremulous; bowels constipated; urine scanty and high-coloured.

The patient states that from the age of 14 he has been a "martyr" to acute rheumatism of the joints, from which he says he never perfectly recovered; from that time he complained of palpitations of the heart. At the age of 21 he had a severe attack of rheumatic fever in Liverpool; the palpitations of the heart were then particularly violent; the dyspnœa also was most distressing, and he was unable to lie down in bed. He was bled from the arm on that occasion, to a considerable amount. He was at the time told that he had disease of the heart, and "that he should take care of himself." He disregarded the caution he had received, and continued at his occupation, which was that of a sailor. He has since had frequent attacks of rheumatic inflammation. He had on his admission a seton over the præcordial region, which he states had been inserted some years back. About a fortnight before his admission into hospital, he was sitting in his cabin with some friends, when he experienced a most extraordinary sensation "coming over his legs;" in the right particularly a sudden numbness commenced at the great toe, then he experienced the same in the great toe of the left leg, and before he could get his stockings off, the toes of both his feet were quite destitute of all sensation. He felt greatly alarmed, got his feet well rubbed and bathed in warm water. Shortly afterwards sensation returned into the left leg, and then into the right, but its restoration into the latter limb was accompanied by the most excruciating agony. On the third day after this he noticed the toes of the right foot becoming blue; vesicles then made their appearance upon them; the same took place shortly after upon the toes of the left foot; and thus the gangrene became fully developed in both limbs.

After a careful investigation into the symptoms of the affection of the heart, I felt convinced that the mitral valve was the seat of the disease, and that there was an attendant con-

traction or narrowing of the left auriculo-ventricular aperture. This disease has been admirably described by Mr. Robert Adams of this city, in the fourth volume of the Dublin Hospital Reports; and I believe he was one of the first to direct the special attention of the profession to the particular alteration which the aperture undergoes in consequence of thickening of the mitral valve. Scarcely any change occurred in his symptoms from the time of his admission into the hospital, except the occasional relief he experienced from the exhibition of medicine, and other necessary stimulants. On the 26th, however, his strength failed most remarkably; and on the 27th, that is eight days from the date of his admission, he sank.

From the advanced stage of the symptoms, both constitutional and local, it is obvious that very little could be done for the patient, except merely to afford alleviation from his sufferings, and at the same time to support his strength. The treatment, therefore, consisted principally in the exhibition of morphia, without which he could procure neither rest nor any ease from pain; the state of exhaustion from which he suffered was relieved by the exhibition of ammonia, both in the form of the carbonate and the aromatic spirit, together with wine and strong beef-tea; warm fomentations and emollient poultices were kept constantly applied to the legs, and from these he experienced comparative ease.

Examination of the Heart after Death.—On opening the pericardium it was found that an effusion of coagulable lymph had agglutinated the anterior surface of the right auricle to the anterior part of the pericardium. A considerable deposit of fat was collected around the line of junction between the auricles and ventricles, and along the line which indicates the situation of the anterior margin of the septum ventriculorum. The heart was preternaturally enlarged, both the auricles and the left ventricle, being more particularly increased in size; the apex of the heart was more rounded than usual; the right ventricle

was rather smaller and thinner than natural; the right auricle was enormously dilated, and its musculi pectinati greatly hypertrophied; the right auriculo-ventricular opening was largely dilated, and, during life, must have admitted a free regurgitation of the blood from the ventricle into the auricle. The left auricle was largely dilated and hypertrophied; the lining membrane strikingly contrasted with its ordinary appearance and structure in the healthy state; it was yellow, perfectly opaque, thick as kid-skin, strong, and tough. I was able to detach it by dissection from the subjacent muscular structure, and then to peel it off from these fibres, by means of the fingers, with tolerable facility, except in one particular situation, which corresponded to the upper part of the auricle: here the endocardium was firmly adherent to the muscular structure, which itself presented an unusually yellowish colour. At this spot, which was about an inch and a half in length, and half an inch broad, the surface of the endocardium which corresponded to the cavity of the auricle was covered with coagulable lymph, which maintained a firm adhesion to a large fibrinous clot that almost filled the cavity of the auricle: in fact this clot may be said to have formed a tolerably correct cast of the auricle, for it nearly filled its entire cavity, and even sent prolongations into the pulmonary veins. The clot could be most easily turned out of the cavity were it not for the adhesion it formed to the spot of the endocardium already described; here it was so firmly adherent that a kind of areolar structure had to be torn through in order to its removal. This was the only rough portion of the endocardium, and in its length a long and slender blood-vessel was seen ramifying upon the surface connected with the clot. All these appearances, with the exception of the small blood-vessel, are well exhibited in the preparation in the Museum of the Carmichael School of Medicine. When I opened the cavity of the left auricle, the knife entered the clot, and a quantity of puriform fluid immediately gushed out; the interior of the clot in which this fluid was contained presented

the appearance of a cavity, not lined, however, by any membrane, but of a rough and irregular character.

The left ventricle was hypertrophied, and its cavity dilated; the auriculo-ventricular opening was so small as to be capable of admitting the introduction of the point of the little finger merely; it was funnel-shaped and patulous, so that during life it must evidently have admitted of a certain amount of regurgitation into the auricle. The mitral valve was rigid and remarkably thickened in its structure. The endocardium where it contributes to form this valve, was thick and firm; and the tendinous structure interposed between its layers was enormously hypertrophied, so as nearly to resemble cartilage. This thickened and rigid condition of the valves gave rise to the altered condition of the opening, and converted it into a funnel-shaped, patulous orifice, which passed downwards for some distance into the interior of the ventricle. This latter cavity, together with its altered mitral valve, very much resembled those oval ink-bottles which contain within them a narrow glass funnel for the purpose of preventing the ink from being spilled.

The bronchial tubes and air-cells were filled with a large accumulation of frothy mucus. The aorta, the iliac, the femoral, the profunda, and the larger branches of the arteries of the legs, were carefully examined; there was not in any one of them a trace of inflammation. All the arteries appeared to be smaller than natural, and the coats of the aorta, iliacs, and femoral arteries were much thinner. The only arteries which contained coagula were the popliteal and the anterior and posterior tibial arteries, but the coagula were not adherent to the lining membrane.

Amongst the various causes of gangrene, organic disease of the heart is one with which practitioners of the present day are pretty generally acquainted, and to which writers have made frequent allusion. In speaking of the causes of gangrene Dupuytren remarks :—" Lorsqu'on examine les individus affectés

de gangrène symptomatique, presque toujours on trouve qu'ils ont fait abus des liqueurs alcooliques, des mets stimulans, ou *qu'ils ont été atteints de maladies chroniques du cœur*"(*a*).

Dr. Carswell, in speaking of mortification as the result of a mechanical obstacle to the circulation of the blood, observes, that it may be caused " by diseases of the heart which greatly obstruct or prevent the return of the venous blood to this organ. The physical characters of the present form of mortification, when succeeding to disease of the heart, are nowhere so conspicuous as in the inferior extremities, and may be regarded as furnishing us with an accurate view of those which accompany the same disease when produced in a similar manner in internal organs. The first local sign that an obstacle exists to the return of the venous blood from the inferior extremities is manifested by the appearance of slight œdema around the ankles. The serosity gradually accumulates in those parts, spreads from thence throughout the cellular tissue, beneath the skin and between the muscles; the feet, and afterwards the legs, thighs, &c., become swollen; the skin assumes a smooth and glossy aspect, feels tense, and sinks into the cellular tissue when pressed, and does not resume its former shape and situation till raised by the return of the serosity beneath it. The colour of the skin, at first natural, becomes pale and waxy, and may continue in this state during the greater part of the course of the disease. When discoloration of the skin is about to take place, it is seen to depend on the presence of subcutaneous veins, which gradually increase in bulk and number, coalesce in several points, and communicate a slightly mottled aspect to the skin, of a dull red or purple colour. On one or more of these points, where the congestion is greatest, and where the skin is less yielding, as over the tibia and above the malleoli, phlyctenæ or large bullæ are formed by the effusion of serosity, either alone or mixed with blood, under the cuticle. When these

(*a*) Leçons Orales, tom. iv. p. 483.

burst, the cutis beneath presents a dark red or brown colour, and very soon is converted into a dirty yellow or ash-grey slough. The separation of the slough is sometimes preceded by an increase of redness in the surrounding cutis, which, from its anatomical characters, and the increase of temperature and pain by which it is accompanied, is obviously of an inflammatory nature. At other times the redness which precedes or accompanies the separation of the dead part is very slight, and is evidently owing to mere venous congestion, occasioned not only by the disease of the heart, but also by the serosity accumulated in the cellular tissue of the limb, which, from the pressure which it occasions, further retards the return of the blood, and aggravates all the symptoms of the disease. It is, indeed, to this secondary obstacle to the return of the venous blood of the limb that the termination of the disease in mortification is chiefly to be attributed. It is likewise in consequence of the accumulation of serosity beneath the skin that the state of congestion of the venous system of the limb is not at first perceived. Congestion, gangrene, and sphacelus may take place on several parts of the leg, but they are in general limited to the parts which have been noticed, *and rarely occur on the feet or toes*"(*a*). The case I have now narrated is, however, an example of gangrene, commencing, not, as has been already remarked, upon the integument of the leg, but on the toes of both feet. I have observed, in common with others, instances of organic disease of the heart attended towards their fatal termination, with the formation of gangrenous patches on the integuments of the lower extremities, already distended nearly to bursting by the effusion of serum underneath the skin; but the extensive destruction of parts which occurred in the present instance forms rather a peculiar and interesting feature in its history.

In the Lancet of the 15th of June last, a very interesting

(*a*) Illustrations of the Elementary Forms of Disease, Art. "Mortification."

case of dry gangrene of the foot is recorded by Mr. Clark. The patient was an inmate of St. Thomas' Hospital; he had been addicted to the immoderate use of ardent spirits; he died about seventeen days after admission. In the *post mortem* examination the heart was particularly attended to, and the writer states that nothing was found there "save a fibrinous clot of an irregular cylindrical form, *which was firmly and inseparably adherent to the lining membrane of the left auricle*, about half an inch above the attached border of the mitral value. The upper part had a clear, amber-coloured, transparent appearance, and was traversed by delicate bands of fibrous tissue entering it at its base, and continuous with the lining membrane of the auricle."

I would wish to avoid generalizing from the results of a single case, but I cannot help thinking, that in many of the cases of gangrene of the toes, such as those described by Mr. Pott, or of the fingers, as described by the late Mr. Colles, the condition of the heart should attract more particular attention than it has heretofore received.

Before concluding, I would wish to offer a few remarks upon the subject of "polypi of the heart," as relating particularly to that description of case which I have recorded. A good deal has been written upon those "concretions," or coagula contained within the cavities of the heart. The subject has received a considerable share of attention in the writings of Hodgson, Burns, Bertin, Bouillaud, Dr. Hope, and in those of Mr. Adams and Dr. Bellingham of this city. These bodies are more frequently found in the right than in the left side of the heart, and in the auricles than in the ventricles. They may form in the heart during life or after death. Dr. Hope recognises three kinds:—1, *The unorganized;* 2, *The slightly organized;* and 3, *The more completely organized.* The first are formed after death, or during the last moments of life, and are more common at the right than at the left side of the heart; they do not adhere to the cavities which contain them. According to Dr. Hope, "the polypi formed some time before death are of a

much firmer consistence, more opaque, and less charged with serum. They are found more frequently on the left side of the heart than recent polypi are; and they adhere more or less firmly to the walls of the heart, from which it is scarcely possible to draw them away in a single piece, as the extremities remain attached under the columnæ carneæ. The medium of adhesion is often a filamentous tissue, the rupture of which leaves a roughness both on the lining membrane of the heart and on the surface of the polypus. Some of these polypi contain pus in the centre, sometimes pure, at others curdy or sanious, precisely what we so commonly see within coagula formed by phlebitis"(*a*).

Cruveilhier has made the following observations upon this subject:—"The theory of the formation of purulent bloody coagula in the heart appears to me explicable by that of the formation of purulent coagula of the veins and arteries. In these, as in the heart, it is always in the centre of the bloody coagulum that the pus is found; but no one that I know has regarded the arterial and venous pus as being the result of the inflammation of the coagula adhering to the vascular parietes. They have said, that this pus has been the product of the phlebitis, without embarrassing themselves with the question how the pus, instead of being interposed between the vein and the coagulum, as one would have thought *à priori*, constantly occupies the centre of the latter; but if this circumstance of the seat of the pus in the centre of the clot were proposed as a difficulty to the theory of the production of pus by the inflamed vascular parietes, I answer in reply, that nothing prevents the pus secreted by venous parietes from traversing the coagulum, and depositing itself in its cells." Again:—"Analogy leads me then to admit, that these purulent coagula of the heart depend upon *the inflammation of its internal membrane*, but only at the points of adhesion; that the central pus

(*a*) Hope on Diseases of the Heart, 4th ed., p. 498.

of the coagula has its origin in the internal membrane of the heart"(*a*). Such is the explanation offered by Cruveilhier.

I believe it will be admitted, that, under certain conditions, coagulated blood in an extravascular state has been known to undergo changes nearly identical with those which take place in a mass of coagulable lymph. Thus, for example, in portions of extravasated blood, the fibrine of the coagulum has been observed to undergo a process of regular arrangement denoting the incipient stages of structural formation; and in a remarkable instance of this description, Mr. Dalrymple has observed the fibrous elongations of the normal white corpuscles as preparatory to their final arrangement and conversion into tissue. All this surely denotes something more than a mere chemical or mechanical separation of the elements of the blood. The phenomena are more or less indicative of vitality, and tend to confirm the ingenious and original views of John Hunter upon the vitality of the blood. These facts prepare the mind for conceiving the possibility of the formation of purulent matter in a mass of coagulated blood; and serve, in some degree at least, to explain how it is that such a degeneration of its constituent elements may take place, as to convert them into that aplastic substance which we recognise as purulent matter. We know from the experiments of Sir E. Home, that the fluid secreted by the vessels of a healthy sore, though when secreted possessing none of the characters of pus, yet after a short time become converted into that fluid; so that it is not until some time has elapsed after its exudation, that it becomes altered into purulent matter.

The microscopical characters of those collections of purulent fluid, of which I have been speaking, have been ascertained by Dr. Bennet to be identical with those of ordinary pus. He observes:—"In another case of heart disease where two small tumours, the size of filberts, were found attached to

(*a*) 28me livraison, planche iv., Maladies du Cœur.

the mitral valves, I found internally numerous exudation and pus-cells. The character of the latter were determined by the peculiar nuclei which were made apparent on the addition of acetic acid. In both cases it is evident that corpuscles had been formed in the coagulum"(*a*).

Without, therefore, adopting the opinion entertained by Cruveilhier, that the formation of pus in these coagula depends upon the inflammation of the endocardium, though that may be present,—or the opinion of Legroux and Dr. Hope, that the coagulum itself may become inflamed and suppurate,—I am inclined to believe that, in instances similar to that which has been now under consideration, the formation of the purulent fluid depends upon the disintegration of the normal white corpuscles composing the coagulum, and a conversion of them into pus-corpuscles. The same process, I conceive, takes place in the centre of those coagula which have been so frequently found in the interior of veins.

Art. XI.—*On Intra-capsular Fracture of the Neck of the Femur, with Rotation of the Limb inwards.* By Philip Bevan, M. D., T. C. D., F. R. C. S., &c. Lecturer on Surgery in the Dublin School of Medicine, Surgeon to Mercer's Hospital, &c.

My attention was attracted by a slight rotation inwards of the thigh in the body of a female aged about fifty years, which was received in the school for dissection.

The great toe rested against that of the opposite side; the limb was shortened by about half an inch; the trochanter major was not as prominent as natural, and the fold of the nates was flattened and slightly lengthened.

No other deformity appeared until pressure was made on the heel, when the shortening increased to one inch and a half,

(*a*) Treatise on Inflammation, by Dr. J. H. Bennet, p. 68.

and as the limb became shortened, it rotated inwards of itself to such an extent that, when unsupported by the opposite foot, it lay flat on the inner edge, and if raised from the table a still greater degree of rotation was permitted; in fact, the toe could be made to describe nearly a semi-circle, the heel being thus placed in front and the toe behind. During even moderate rotation the upper part of the thigh had a remarkably twisted appearance. Rotation outwards was permitted to its natural extent, and whilst in that position a projecting line was observed extending from the anterior spine of the ilium to the trochanter major, evidently caused by the tensor vaginæ femoris, and the anterior edge of the gluteus medius muscle. Extension and flexion were normal, and no crepitus could be felt, whether the limb was extended or not. As some doubts existed concerning the nature of the accident, accurate measurements were taken, both when the limb was elongated, and when shortened as much as possible by pressing on the heel. In its elongated state, the distance from the trochanter major to the anterior spine of the ilium measured, when rotated outwards, five inches, and, when rotated inwards, three inches and a half. In its shortened state, the distance between the same points measured, when rotated outwards, four inches and a half, and when rotated inwards, three inches, whilst the distance between the same points on the opposite side measured, when rotated outwards, four inches, and when rotated inwards, three inches. Thus the trochanter was more distant from the spine of the ilium on the injured than on the sound side by half an inch in its shortened, and by one inch in its lengthened state. The distance from the trochanter to the crest of the ilium was, in the shortened state of the limb, nearly one inch and a half less than on the opposite side.

From these measurements it appears that the trochanter was placed *above and behind* its natural position, especially when rotated outwards, its distance from the spine of the ilium

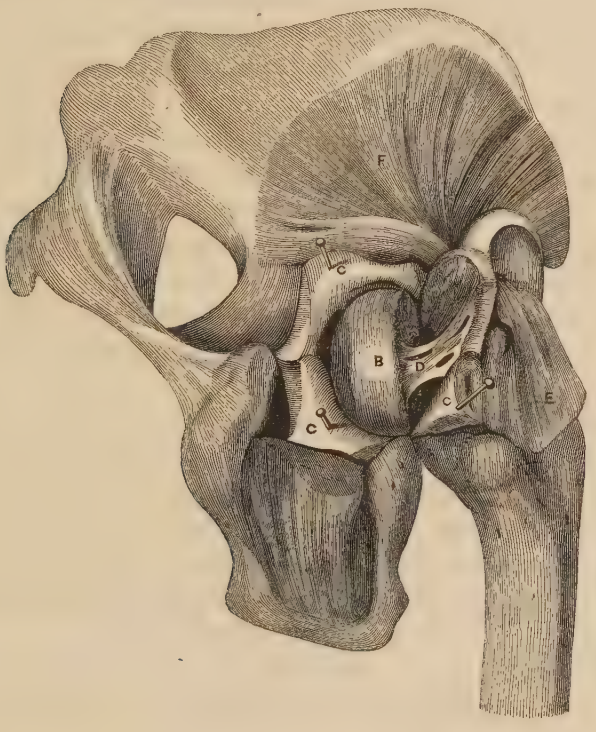
being from four inches and a half to five inches on the injured side, whilst it was only four inches on the sound side; the distance of the trochanter from the crest being, at the same time, diminished.

On dissection, the small rotators outwards on the back of the hip, the obturators, pyriform muscle, &c., were found to retain their natural attachments to the digital fossa, and all the other muscles of the thigh were perfectly unaltered, except the anterior edges of the gluteus medius and gluteus minimus, which, especially of the former, were somewhat thickened. I examined particularly the psoas and iliacus and the obturator externus, but could not find any alteration, such as has been observed in other cases of fractured neck of the femur of long standing.

On raising the muscles the capsular and accessory ligaments were perfect, but very much thickened throughout their entire extent. Before opening the capsule, it was observed that, when the bone was pressed upwards, the trochanter major passed upwards and backwards towards the dorsum ilii, and thus rendered tense the anterior part of the capsular and the accessory ligaments. This limited rotation outwards, and gave an inclination to rotation inwards. No fracture was yet apparent, but the free motion of the bone in all directions led me to expect one within the capsule.

On opening the capsular ligament, it was found that the neck of the bone had been entirely absorbed from its head to its attachment to the shaft; the opposite surfaces were transverse and regular, and connected to each other by a few long bands of soft lymph; these were smooth, soft, shining, and totally destitute of a fibrous character. No new bony deposit had taken place, either on the head or shaft, nor was there any fluid in the joint. The synovial membrane was coated with lymph to a great extent, and thus had lost its polished appearance. The head of the bone was lodged in the acetabulum, and scarcely projected beyond its brim. It moved very slightly

when pressed on, which must have arisen from a thickened state of the ligamentum teres, as there were no adhesions between it and the acetabulum(*a*).



The case was therefore one of intra-capsular fracture of the femur, of long standing.

The occurrence of rotation inwards in cases of fracture of

(*a*) The wood-cut exhibits the joint laid open from behind, the limb in a state of rotation inwards; the head of the femur is raised as much as possible from the acetabulum, to show its flat surface. B, the head of the femur: its cartilage is absorbed in some places, and shows the surface by which it was formerly connected with the neck; C, capsular ligament, thickened as seen by its cut edges; D, long bands of lymph connecting the head to the shaft; E, pyriform and obturator muscles, cut across, hanging from their point of attachment to the digital fossa; F, gluteus minimus.

the neck of the femur, although doubted by Boyer(*a*), has been seen by so many other surgeons of eminence, that its occasional presence is now generally admitted. Still its cause cannot be said to be well ascertained, and not one of the explanations already proposed would account for it in this case.

Mr. Guthrie has thus explained its occurrence in a case which he dissected:—"The trochanter minor was torn off; the head and neck of the femur were separated from the shaft by a diagonal fracture extending from the upper and outer part of the trochanter major to the trochanter minor, so as to leave the pyriform, the two obturators, the gemelli, and the quadratus femoris, attached to the head and neck; the gluteus medius formed the bond of union at the upper part of the trochanter major, between the broken pieces retaining them in contact"(*b*).

According to his explanation, the rotators outwards being detached from their connexion with the shaft, the rotators inwards were left uncontrolled, and rotation inwards was the result. Mr. Syme has reported a similar case, and offered the same explanation. But their views cannot apply to the present case, as in it the rotators outwards remained perfect, and the fracture was entirely within the capsule.

Dupuytren has met with only two cases presenting this symptom. He attributes it to obliquity of the fragments. But his explanation cannot hold good in the case I have described, as the surfaces were perfectly regular, and nearly transverse.

Professor Smith, in his Treatise on Fractures(*c*), expresses the opinion, that the lower fragment is placed in front of its natural position, and that this position probably tends to render the pectineus and superior portion of the adductor magnus rotatory inwards, whilst the position of the superior fragment behind the inferior presents a mechanical obstacle to rotation outwards, the tendency to which is further prevented by the

(*a*) Traité des Maladies Chirurgicales, tom. iii. p. 264.
(*b*) Med. Chir. Trans. vol. xiii. p. 111. (*c*) Page 27.

diminution in the power of the small rotator muscles of the hip, consequent upon the fracture of the trochanter. That the insertion of the pectineus and adductors could be thrown so much forwards as to be placed in front of their origin, and become rotators inwards, must be very doubtful; but even such a position would not explain the symptom, as the extreme tension of the gluteum maximus and quadratus femoris would more than compensate for the loss of power of the adductors. But as he is conscious "of the insufficiency of these observations to explain the occurrence of the phenomenon in question in cases of intracapsular fracture," his observations cannot apply to this case.

Mr. Stanley has also narrated a case of intracapsular fracture presenting this symptom. He says:—"A portion of the synovial membrane which had escaped laceration on the anterior part of the cervix, might probably prevent rotation outwards, but why it should have rotated inwards, I confess myself unable to explain"(*a*).

Cruveilhier has also given a case. He supposes that "cette déviation dépends, au moins en partie, des rapports que concract les fragments"(*b*). This explanation, unsatisfactory in his own case, would totally fail in the present one.

Malgaigne is equally unsuccessful; he supposes that the limb preserves the direction given to it on the plane of support; and Ekl thought that it arose from the neck of the femur being driven into the shaft in an oblique direction: but neither of the latter theories would apply to the present or many other cases.

In order to explain this phenomenon, I must beg to recall the attention of the reader to the experiment already detailed, namely, on pressing the heel the limb became shortened and rotated *inwards* of itself, and the trochanter passed above and behind its natural position, as proved by measurement, and on

(*a*) Med. Chir. Trans. vol. xiii. p. 509.

(*b*) Anatomie Pathologique, livraison xxvi. p. 2.

attempting to rotate outwards, a tense line was observed passing from the spine of the ilium to the trochanter, caused by the tension of the rotators inwards, the tensor vaginæ femoris and glutei muscles. The altered position of the trochanter major, that is to say, its being thrown upwards and backwards, was obviously the cause of the tension of the latter muscles.

To account then for this alteration in position, must be our first object. This will not be difficult if we reflect on the effect which the loss of the neck of the femur will produce on the two orders of rotators.

The rotators outwards may be divided into two classes, the one consisting of the gemelli, obturators and pyriform, inserted into the digital fossa; the other, the adductors, inserted into the inner and back part of the shaft. The former would lose entirely their rotatory power when the neck of the bone was removed, and would draw the trochanter upwards and backwards(*a*); the latter would still retain some rotatory power, but would act chiefly in shortening and adducting the limb; and the combined action of both sets being then very trifling as rotators, their principal effect would be to adduct, shorten, and throw the trochanter upwards and backwards, into the position, in fact, observed in the present case.

The effect produced by the loss of the neck of the bone on the rotators inwards, will be very different, for whilst, on the one hand, they, being inserted into the outside of the shaft, or into the fascia lata on the outer and back part of the thigh, will lose little of their rotatory power; on the other hand, the distance between the spine of the ilium and the trochanter being increased by the altered action of the rotators outward, already described, will throw them, the tensor vaginæ femoris and glutei medii, on the stretch, and thus absolutely increase their power

(*a*) That this would be their action is proved by Case 29, in Dr. Smith's Treatise on Fractures, p. 85, where the trochanter major being detached was drawn upwards and backwards by the pyriform, gemelli, and obturator muscles.

as rotators inwards. Thus, in the present case, the neck of the bone being absorbed, the several rotators outwards, above named, whilst they lost the principal part of their power as rotators, carried the trochanter above and behind its natural position; they thus rendered tense the rotators *inwards* and the anterior part of the capsular ligament, and increased their power, so as to enable them completely to overcome the remaining rotators outwards; in fact, the phenomena depended on the altered action of the rotator muscles ; the one set lost their proper function, and, instead of it, assisted their former antagonists,—the rotators outwards, and, by drawing the trochanter backwards, indirectly aided the rotators inwards.

This explanation would satisfactorily account for the rotation inwards in Mr. Langstaff's case, where, as long as the patient's limb retained its normal length, so long it was rotated outwards, but as soon as it became shortened by the absorption of the neck of the femur, it rotated inwards(*a*); and in Mr. White's case, where, after removing three inches of the femur, the limb was constantly rotated inwards on the patient's resuming the erect position.

Although this account is best suited to cases where the neck of the bone is removed by absorption, I think it quite possible to extend it to some cases of fracture even without the destruction of the neck. For instance, the shaft might be thrown behind the neck and its natural position ; in such a case, the small rotators outwards would be very much relaxed, and thus would, to a certain extent, lose their action, whilst the rotators inwards being rendered tense by the altered position of the shaft, would cause the inversion of the limb.

I am far from supposing that this explanation will apply to all cases where this symptom has been observed; on the contrary, I think it more than probable that, as the fractures differ in site and direction, no one theory will be applicable to all.

(*a*) Med. Chir. Trans. vol. xiii. p. 487.

Mr. Guthrie's explanation will apply to some cases external to the capsular ligament. Impaction will account for it in some cases both internal and external to that membrane, whilst the one I propose will explain either those where the neck of the bone has been absorbed, or where the trochanter has been thrown behind its normal position.

Besides assisting in discovering the cause of rotation inwards, this case appears valuable by showing the difficulty in diagnosing between fracture and luxation on the dorsum of the ilium.

It proves that the diagnostic signs laid down by systematic authors are incorrect, and not to be depended on, viz.:

"That in dislocation on the dorsum of the ilium, the inversion of the foot is complete, the great toe is turned inwards and rests on the instep of the opposite foot, the limb being two inches shorter.

"In the dislocation into the sciatic notch, the inversion is decidedly marked, but is not so complete as in the preceding case; the knee and great toe turn in, the latter resting against the ball of the great toe of the opposite foot, and not admitting of rotation outwards. The limb is but little shortened, yet cannot be lengthened without much force.

"In fracture the inversion of the foot is less complete, the great toe merely turns to the opposite one, and sometimes scarcely does this; the limb is but little shortened, is easily everted, readily moved in almost every direction, and is restored to its proper length by the application of a very moderate extension"(*a*).

Now two of the most important of these points are contradicted by the present case, for the inversion was greater than in any dislocation, as the foot rested on its inner edge, and the shortening was greater than in luxation into the sciatic notch, and equal to that on the dorsum of the ilium, whilst the tro-

(*a*) Guthrie, Med. Chir. Trans. vol. xiii. p. 114; also King, in the Cyclopœdia of Surgery.

chanter was placed above and behind its natural position, as in luxation. Thus the only diagnostic signs on which we can rely are the ease with which we can rotate outwards, the greater mobility of the limb, and the power of lengthening it by a moderate force, in fractures, when compared with luxations. I need not insist on the importance of the diagnosis when we recollect that one able surgeon says that his patient died of the effects of repeated attempts made to reduce a supposed luxation; and Professor Smith's twenty-ninth case was mistaken for a luxation(*a*).

In conclusion I may remark, that, in the subject of the injury I have now described, there was a fracture of the humerus on the same side, partly within, partly without the capsular ligament, with absorption of the bone to the extent of one inch and a half; all the other bones were perfectly healthy. Both preparations are in the Museum of the Dublin School of Medicine.

Art. XII.—*On Chronic Pneumonia.* By John Popham, A.B., M.B., Physician to the Cork North Infirmary.

The pathology of chronic inflammation of the pulmonary tissue is still in such an unsettled state, and it is so difficult to draw the boundary line between induration of the lung arising from slow structural inflammation, and the consolidation which is met with in phthisical lungs from grey tubercular infiltration, that it is important to place on record any case which may throw even a doubtful light upon this difficult question. I venture, therefore, to submit the following, which appears to me to present some points of unfrequent occurrence bearing upon this subject; not with the view of generalizing from a single example, but in the hope that it may stimulate others to give instances of a more decided character drawn from more ample observation.

(*a*) *Loc. cit.* p. 29.

A woman, named Bridget Callanan, aged 44, was admitted into the Cork Union Hospital, April 14, 1848, with cough and dyspnœa. She was a worn-looking person, with a remarkably sallow countenance, and according to her own account she had been ill for six or seven weeks, daily becoming worse, her occupation as a fruit-seller obliging her to sit during all kinds of weather in the open air. Besides the severe cough and oppression, she complained greatly of palpitation, which caused her such distress that she was obliged to rest after taking a few steps, from a feeling of syncope coming on. On proceeding to examine her chest, my attention was drawn to a visible pulsation which existed a little below the right clavicle, at its sternal end, and which gave a strong impulse to the stethoscope. A double sound, but without any abnormal murmur, was heard over it with marked clearness. The loudness of the sounds diminished as the stethoscope receded from the seat of pulsation, until it approached the heart, when they again became fully audible. The heart, however, was not in its normal place, being felt to beat under and a little to the right of the sternum. The carotid arteries pulsated visibly, but without any bruit. A paroxysm of coughing augmented considerably both the pulsation and the sounds. On percussing the chest, dulness was found to exist from the right clavicle as far as the mamma, below which, for about two inches, the sound was morbidly clear; in this latter space respiration was inaudible, and in the part where the sonoriety of the chest was diminished it could only be heard feebly upon a forced inspiration, except immediately beneath the clavicle, where it was tubular, and the voice very loud and clear. Posteriorly, dulness and deficient respiration existed below the spine of the scapula; inferiorly and laterally, however, the sound became resonant, as it was below the mamma. At the left side the respiration was puerile, and remarkably so under the clavicle. The dyspnœa was persistent, becoming aggravated at times, but attended with little pain. Decubitus was chiefly on the right or affected side.

The cough was constant, the expectoration thin and viscid, and occasionally streaked with blood. Some œdema of the face and feet existed. Her pulse was generally over 100, sometimes rising to 120. It was curious that no loss of energy existed in the digestive organs, her appetite remaining good until a short time before death.

On reflecting upon the symptoms and physical signs of the above case, my first impression was that the disease was tubercular; still there were anomalous features which threw a doubt upon the diagnosis. The stethoscopic signs pointed clearly either to a cavity or a largely dilated bronchus under the right clavicle, and the dulness on percussion over so large a portion of the right side of the chest, and the feebleness of the respiration, approaching in some parts to complete absence, in the subjacent lobes, might be explained by copious and sudden deposition of tubercles. Still the tympanitic clearness in the infra-mammary and lateral regions, unaccompanied by the usual signs of pneumothorax, and the obvious displacement of the heart to the right side, the left lung remaining healthy, presented symptoms not usual in phthisis. Besides, the countenance of the woman had not the expression which often enables the medical physiognomist at a glance to predict tubercle; it had a sallow, greasy kind of aspect, something like the anemic appearance of a person suffering from long-existing disease of the spleen. Another embarrassing symptom was the throbbing under the right clavicle, whether it was to be regarded as aneurismal,—the concurrence of aneurism and tubercle being, as Rokitansky has observed, so rare, that he only met with five cases of tubercle in 108 of aneurism,—or whether it arose from contiguity with a solid body, presenting an exciting and unyielding surface to the pulsation of the heart and its larger vessels.

This woman continued in hospital for six weeks, death having occurred on June 3; still the progress of the case left the diagnosis unsatisfactory. The tubular respiration and pectoriloquy which were heard under the right clavicle gradually

extended over a wider area, and below this point no respiration was finally audible, showing that the solidification of four-fifths of the lung was complete. Towards the close of the case the pulsatory appearance above noticed diminished remarkably, being only appreciable upon a violent fit of coughing. The parietes of the thorax at the right side, and especially under the clavicle, became depressed. At the left side some changes also ensued, respiration of a tubular character being heard under the left clavicle, and bronchial murmurs throughout the lung. At this period dysentery came on, and being anxious to return to her friends, she imprudently, and without my sanction, made an effort to leave the hospital. She was brought back in a state of syncope, and sank rapidly afterwards. Her intellect was clear to the last.

Autopsy.—The muscular and adipose tissues of the thorax were much attenuated, while the rest of the body was not much reduced. On opening the chest, the heart lay along the sternum, encroaching considerably upon the right side. The left lung did not collapse, but, on the contrary, was greatly engorged, not only filling its own cavity fully, but pushing the mediastinal septum considerably to the right, so that when the sternum was removed, the margin of the left lung extended into the cavity of the right side. The superior portion of its upper lobe was hepatized, and contained two or three small abscesses holding pus; the rest of the lung was loaded with serum deeply tinged with blood, and the mucous membrane of the bronchial tubes was red and swollen. No adhesion of this lung existed. The right was closely united anteriorly with the costal pleura by a thick fibro-cartilaginous membrane; on dissecting this away, the lung appeared to occupy about three-fifths of the cavity, not extending beyond the right mamma. Corresponding to the parts where the sound on percussion was clearer than natural, a large space existed between the inferior surface of the lung and the liver, which viscus did not ascend into the thorax. No air was perceived to escape from this cavity, and a small

quantity of serum, with gelatinous shreds, lay at the bottom of it. On detaching the lung, it presented an ovoid form, about five inches long, by from two and a half to three in width and thickness, the widest portion being at the division of the right bronchus, whence it tapered downwards to a point. Adhesion of the lobes had occurred, so that the whole looked as if it had been fused into a mass. On trying to separate the upper lobe the knife entered a large cavity from whence issued about a couple of ounces of genuine pus. The walls were thin, and there was no false membrane lining the inner surface. The rest of the lung was converted into a firm, fleshy texture, very heavy, which, on a section being made with the knife, appeared whitish and dry, not exhibiting a trace of blood. In some parts of it the grey colour predominated, in others the blue, or rather slate colour, was interspersed. The right bronchus was greatly dilated, and its branches in proportion. The tube going to the lower lobe ended abruptly in a cul de sac; the subdivisions of the others penetrated as far as the pleura. A section of the inferior lobe exhibited scarcely a vestige of bronchial branches, but in the middle and upper lobes they appeared more numerous. No sign of tubercle, as far as we could discover, existed in either lung.

The pericardium contained a small portion of yellow serum. The heart was small and its walls flaccid, the right auricle being so much softened as to seem almost gelatinous. The aorta was rather dilated at its transverse portion, without any breach of surface either there or in any of its large vessels.

The above case presents so many points of resemblance to the affection described by Dr. Corrigan, in the thirteenth volume of the first series of this Journal, under the name of cirrhosis of the lung, that I felt some hesitation whether I should not be justified in designating it as an example of that disease. Thus the close resemblance to phthisis, which he has noticed to prevail in the symptoms and signs of cirrhosis, existed in this case, such as hemoptysis, dulness of sound, flattening of

the walls of the side affected, pectoriloquy, and bronchial respiration; while again we had in it some of the signs which he regards as contradistinctive, for example, the augmented volume of the opposite lung, and the displaced heart. But in looking to the chief morbid alteration of the lung found in Dr. Corrigan's cases, namely, dilated bronchial tubes, ending in oval or rounded pouches, a sufficiently marked difference exists; in the above example, purulent abscess at the apex being a characteristic feature. In the complemental lung, which was hypertrophied, both in Dr. Corrigan's second case and in the above, morbid changes of a similar character were noticed, indicative of chronic inflammation, viz., hepatized spots and small isolated abscesses. In the symptoms and signs, however, of the two cases, though a general similarity exists, yet there are also some important points of difference. Thus, Dr. Corrigan, in his valuable memoir on cirrhosis, marks the absence of constitutional irritation, as being in striking contrast to the intensity of the local signs; while in the present case a degree of hectic fever continued throughout, with an excited pulse. Again, the throbbing sensation under the right clavicle did not exist in any of his cases. From these circumstances, and the general appearance of the lung, the above would seem to be rather a case of chronic pneumonia, with the rare occurrence of abscess in the superior lobe. Dr. Stokes observes that he has seen several cases of chronic abscess of the lung, but he assigns the lower lobe as the seat. "An abscess, sometimes of considerable size, occupies the lower portion of the lung; its walls are firm, and of an iron-grey colour, and the surrounding lung is in the state of chronic induration"(*a*). But we are informed likewise, by the same high authority, that *acute* pneumonic abscess may take place in the superior lobe(*b*); and there would seem no adequate pathological reason, why a part of the lung occasionally liable to the acute, should be exempt from

(*a*) Stokes on Diseases of the Chest, p. 317. (*b*) *Op. cit.* p. 314.

the chronic form. Perhaps the greater degree of fever noticed in the above case, than in the instances witnessed by Dr. Stokes, may arise from the seat of the disease, inflammation of the upper lobes being, as Andral has observed(*a*), more dangerous than of the lower. We must also take into account the sympathetic fever which usually attends the formation of pus, the total inutility of one lung as a respiratory organ, and the asthenic condition of the muscular power of the heart, as concurring causes in the present case to lead us *a priori* to infer rapidity in the circulation.

The occurrence of a cavity in the upper lobe might lead to the suspicion that it was of tubercular origin; and the similarity of the physical signs of pneumonic and phthisical abscess during life, and the want of specific marks of difference in the appearance of their cavities after death, might be supposed to favour this opinion; but in the present instance, besides the purulent nature of the contents of the cavity, seemingly identical with undoubted abscess, no appreciable sign of tubercle existed in the surrounding lung, or of the tuberculous constitution in other organs. No doubt phthisical cavities occur surrounded with pneumonic induration, but sufficient traces of the scrofulous diathesis generally exist to detect their true nature.

The nature of the throbbing in the subclavian region, and its diminution as the disease advanced, renders it a sign of peculiar interest; indeed, both in strength of impulse and correspondence with the systole of the heart, it counterfeited aneurism very closely. The occurrence of pulsation as a sign of pneumonia was noticed in an interesting case bearing some resemblance to the above, published in the Dublin Hospital Report by Drs. Graves and Stokes(*b*), and there explained to arise from the impulse conveyed from the dilated right ventricle. More recently Dr. Graves has drawn attention to the same

(*a*) Clinique Médicale, translated by Spillan, p. 407.
(*b*) Dublin Hospital Reports, vol. iv. pp. 80–84.

circumstance, for which he has proposed a different explanation(*a*). As yet it appears to have been noticed only in pneumonia and cancer of the lung.

Art. XIII.—*On the Chronic Diseases of the Laryngeal Mucous Membrane.* By Eben Watson, A. M., M. D., Fellow of the Faculty of Physicians and Surgeons of Glasgow, Professor of the Institutes of Medicine in Anderson's University, &c. &c.

It is usual to arrange the chronic diseases of the laryngeal mucous membrane according to their remote or proximate causes: but the constant plurality of such causes in the same case, and the difficulty of ascertaining with sufficient exactness to which the disease owes its origin,—a difficulty almost insurmountable in regard of remote causes,—render these and most other etiological classifications useless in practice. The cases which have occurred in my practice might, I think, be more conveniently arranged in two groups, according as the chief complaint of the patient was laryngeal cough or alteration of the voice. Doubtless, both these symptoms do sometimes occur in the same case, and at the same time; but even then it is by no means difficult to discover which is the more severe or important of the two. The patient himself, on applying for advice, at once directs attention to one or the other, as that which he would have removed, and which, being present, constitutes his disease.

I do not mean, in the following essay, to write a systematic account of the varieties of chronic laryngitis; but the fact which I have just mentioned presents itself so constantly to me in my daily experience, and appears to me so well suited to become the basis of a practical classification of these diseases, that I can-

(*a*) Graves' Clinical Medicine, by Neligan, vol. ii. p. 39.

not forbear illustrating it by the brief relation of two cases from among those at present under my care.

Case I.—A clergyman, long in the habit of over-exerting his voice in public, began to complain some months ago of hoarseness, and difficulty in making himself heard. These symptoms gradually increased in severity, but still he persevered in the exercise of his usual duties, until one morning, when he spat up "a trifling quantity of blood." His medical attendant relieved his mind at once of all apprehension regarding his lungs, but very judiciously forbade his appearing for some time in the pulpit. There was no return of the hemoptysis, but the voice remained weak and husky in spite of various means that were used for its improvement.

Soon afterwards this gentleman became my patient, and his only complaint to me was huskiness and weakness of voice, with speedy hoarseness when he spoke or read aloud for even a short time. On inspecting his throat, the soft palate was seen to be swollen, and a good deal relaxed. The mucous membrane was red and inflamed; and that part of it covering the epiglottis felt swollen, and velvety to the finger.

The history of this case would be incomplete did I not state that early in the ministerial career of my patient, he was called on to preach in a very large church, and that, in attempting to fill it with his voice, he, perhaps unconsciously, assumed a pitch beyond its natural range. A continuance of exertion in this false tone was, I doubt not, a strong predisposing cause of the affection under which he now labours.

Case II.—The other case referred to is that of a young lady, who, towards the end of last winter, became affected with spotted sore throat, which received due treatment, and was supposed to be cured. From that time, however, she complained of frequent and pretty severe cough, which was soon accompanied by expectoration. She underwent a variety of treatment, and visited different spas and watering places without

much effect on the symptom just mentioned; but, fortunately, her general health always remained good.

Her chest was frequently examined by different auscultators, but nothing materially wrong could be detected in the lungs. At last it was supposed that the disease must be in the windpipe, and under this impression she lately placed herself under my care.

I can detect no abnormality in the chest, except a slight harshness of the respiratory murmur in the large tubes on each side of the upper part of the sternum. The breath sounds in the larynx are unnaturally loud and rough; and are generally accompanied by a moist râle.

On examining by the mouth, the pharynx is seen to be wide and cavernous. Its mucous membrane is very red in some places, to which large apparent vessels converge, and in other places it seems thin and transparent, loosely stretched over the muscles. To the finger the parts communicate a corresponding sensation of unnatural attenuation, and the epiglottis is felt stiff and narrow at the root of the tongue. The doughy feeling, in a degree natural to these parts, and so remarkable in the preceding case, is altogether absent from this one.

I have already said that this patient's general health is quite good, her appetite is excellent, and her digestion regular. She sleeps well at night; her pulse is slow and regular, and in fact she has no complaint whatever, except the cough and the expectoration of nearly pure mucus, both of which trouble her chiefly on rising in the morning.

Considering all these circumstances then, I did not hesitate to confirm the diagnosis which had been hazarded; supported as that diagnosis was both by positive signs of actual disease in the laryngeal mucous membrane, and by the absence of those of any other disease which could occasion the symptoms complained of by the patient.

I might adduce many similar cases from my note-book, but

the two just given, and which I have selected from among those at present passing under my observation, will, perhaps, demonstrate the reality and importance of the circumstance alluded to, even more forcibly than could be accomplished by multiplying examples to the same effect.

In reflecting on the cases narrated, one is led to inquire how it happened that, both these patients being the subjects of chronic laryngitis, the one was seized with cough and expectoration, while the other lost his voice. The previous circumstances of the two patients furnish us with the only answer we can at present give. The clergyman had long over-exerted his voice, the lady had not. Hence, in the former, when the chronic inflammation attacked the mucous membrane of the larynx, it speedily concentrated its energy upon the glottis, which was the most vascular and irritable portion of the organ affected. The circulation through it became thenceforward impeded, and a gradual œdema commenced. Whereas, in the other patient, the force of the inflammation was expended on the secretory apparatus of the pharyngo-laryngeal membrane, its functions became impaired, and a vitiated mucus was in a short time copiously poured upon the irritated glottis. Cough in fits, and accompanied by expectoration, was the infallible consequence.

This case, then, will at once be recognised as similar in many respects to those described by Dr. Horace Green, of New York; but it differs from them, in that the voice was never affected and the follicles were never abnormally visible in the pharynx; for the spots, seen at the commencement of the disease, were too superficial and transient to have been suppurating follicles. Indeed I am pretty sure that the dreadful affection, so vividly described by Dr. Green as common in America, is, fortunately, of rare occurrence in this country. Out of a considerable number of laryngeal cases presented to my observation, I have only met with two which might be accounted as instances of Dr. Green's follicular disease.

Case III.—One patient was a schoolmaster from the Highlands, who had been a victim of the malady for many years. When I saw him he spoke in a husky whisper, which could only be continued more than a few minutes at the expense of much pain, referred to the region of the glottis. This pain was always caused by speaking, but ceased to trouble him when silent. His cough was harassing, and the expectoration profuse, frothy, and sometimes mixed with blood, at other times with little white cheesy substances.

His chest was free from disease; but the laryngeal respiratory sounds were louder and shorter than usual. The fauces and pharynx were studded over with white spots, the suppurated follicles, surrounded by red and swollen mucous membrane. His general health was bad; his tongue furred; his pulse quick and excitable; and his face flushed. He had also nightly perspiration and great general debility. I have not learned the issue of this case, but I should fear the worst, from the extent and duration of the disease, as well as from the circumstances of the patient.

Case IV.—My other patient was the manager of a granary in Glasgow. He asked my advice on account of the following symptoms, viz.:—deep hoarseness and weakness of voice; pain when he attempted to raise it in calling to his workmen; a feeling of dryness in his throat, and difficulty in swallowing; a short tickling cough; and the expectoration of little white substances.

On looking into his mouth, the mucous membrane, as far as could be seen, was found in nearly the same state as that described in the former case. There was considerable relaxation of the soft palate, and a good many inflamed and suppurating follicles could be seen. No pectoral disease could be detected, and the general health was quite good. The patient thought that his complaint originated in cold, after an attack of measles which occurred ten years before I saw him, and since which time he has always complained more or less of the symptoms formerly mentioned.

I may remark here, in passing, that a blister over the throat, and the application of a solution of nitrate of silver (one scruple to the ounce of water) to the pharynx and upper part of the larynx, every second day, for about a month, were successful in removing all disease from these parts.

I believe these are fair samples of what Dr. Green would call follicular disease of the pharyngo-laryngeal membrane. There can be no doubt of the follicular affection in the pharynx, but I think it doubtful that the follicles of the larynx were similarly affected. It is worthy of remark that in all the larynges and tracheæ which M. Louis examined, and found ulcerated, he does not mention his having seen enlarged follicles in any one case. Now if these ulcers had originated in the follicles, it seems next to impossible that some of them should not have been detected, in a state of inflammation and partial ulceration, surrounding others farther advanced in that process. Nor can I regard this as an oversight on his part; for I do not recollect any case in which enlarged or inflamed follicles were detected in the larynx by MM. Trousseau and Belloc, by Mr. Porter or Mr. Ryland. Certainly there is no mention made by Dr. Copland, in his Dictionary, of altered follicles as one of the morbid lesions of chronic laryngitis found after death; and even Dr. Green himself has not favoured us with the details of any one inspection demonstrative of the proximate cause of the disease on which he writes.

In the cases, which I have related above, it does not seem to me by any means necessary, in order to account for their symptoms, to suppose that the laryngeal follicles were in the same state with those in the pharynx. An extension of the chronic inflammation to the laryngeal lining membrane is in itself sufficient to explain the phenomena referred to; and I am free to admit the probability of this inflammation having been first excited in the pharynx by follicular disease, and that it spread thence into the larynx. Even in some of Dr. Green's own cases I have thought that the evidence on which

he concluded the laryngeal follicles to be gravely affected seems unsatisfactory.

Thus, in the case of the Rev. Mr. S. (given at pp. 58–61 of his work on Bronchitis, &c.) he writes as follows:—"Pressure on the thyroid increased the pain and soreness which were constantly felt in the larynx. This last symptom, together with the permanent hoarseness and the partial extinction of the voice, was plainly indicative of the mucous follicles of the ventricles, and of those around the chordæ vocales, being involved in the disease." Now I must say, with due deference to Dr. Green, that although pressure on the thyroid might assist in a diagnosis of the condition of the pharynx, it could yield no indication of the state of the lining membrane of the larynx. And who does not know that permanent hoarseness and partial extinction of the voice often exist without any affection of either pharyngeal or laryngeal follicles? Constant pain in the larynx, moreover, is often complained of when chronic inflammation of part of its lining membrane is the only cause, and, when the pain is severe as well as constant, it is certainly not less characteristic of ulceration in any of its various forms than it can possibly be of follicular disease. I do not mean positively to deny the existence of this disease in the larynx, but to point out the absence of all pathological proof of its reality; and that the assumption of it, as the cause of certain symptoms, is neither necessary nor philosophical.

The diagnosis of the actual state of the larynx in chronic cases is, indeed, often a matter of the utmost difficulty. Little, as we have seen, can be argued from inspection of the fauces; since, when they are morbidly altered, it cannot be concluded that the larynx is similarly changed, and in a large class of cases there is no visible disease in the pharynx, while the symptoms decidedly indicate a laryngeal affection. The great desideratum, then, to which these facts point, is some mechanical contrivance, by means of which we could see at least the epiglottis and the entrance to the larynx; but, hitherto, all at-

tempts at a laryngeal speculum have failed, and we are at present unable to see any part of the larynx, except, in certain cases, the tip of the epiglottis. I cannot, therefore, omit entering my humble protest against the vague or erroneous expressions of some writers on this very subject. Thus Dr. Horace Green speaks (at p. 60 of his work, already quoted) of "pressing down the tongue," and seeing "the epiglottis standing from its base, erect and œdematous, its edges slightly ulcerated, whilst a vitiated mucous secretion was being constantly poured out from the diseased glands." And one of his friends, Dr. Alfred C. Post, one of the surgeons to the New York Hospital, writes as follows to Dr. Green(*a*):—"In a number of instances I have exposed distinctly to view the laryngeal surface of the epiglottis, and, passing over it the sponge saturated with the caustic solution, I have had ocular demonstration of its application to the mucous membrane of the larynx." On reading these passages, I was inclined to think that the parts in question must be differently formed in the inhabitants of the New World from what they are in those of the Old ; for my experience, as well as that of all with whom I have conversed on the subject, is, that in but a few instances can even the tip of the epiglottis be exposed to view.

I am at present attending a patient whose epiglottis can hardly be reached with the finger, and this state of the parts I have not unfrequently met with in cases in which no ulceration had ever taken place. What, then, am I to say of the following passage, which occurs in a review of Dr. Horace Green's work on croup, which appeared in the Lancet of January 26, 1850?

"This gentleman, Dr. Hancock Douglas of New York, a near relative of Dr. Green's, had also in his case a tongue spatula, without the aid of which it would be difficult to *freely expose the* GLOTTIS to the view. On placing the spatula on the

(*a*) See Appendix, p. 260.

tongue, that organ is readily brought forward, and the *fissure* can at once be seen, and the instrument readily introduced."

I think the Lancet ought to have given a figure of this wonderful instrument, or at least an accurate description of it; and I some time since wrote to the editor to that effect, but neither figure nor description has yet appeared. If, however, this spatula be the same with that recommended by Dr. Green, a description of which may be found in that gentleman's work, I am sure it cannot fulfil any such expectations as those held out by the reviewer in the Lancet. In truth, the structure and relations, as well as the functions of the parts themselves, render nugatory all attempts to obtain a satisfactory view of them in the living subject. This was fully stated by MM. Trousseau and Belloc many years ago, in their admirable work already referred to; and their observations have been found but too true by myself in some experiments I have lately made with different mechanical contrivances.

The physical signs, then, of the chronic affections of the larynx, do not in general include those which may be seen. More dependence, I think, may be placed on the information obtained by touching the parts with the finger introduced through the mouth. In this way the various changes of the epiglottis may be discovered, and either the doughy feeling of œdema, or the more resisting impression conveyed to the finger in thickening of the mucous membrane itself, may be diagnosed as far down as the thyro-epiglottidean folds, or perhaps in some instances even to the glottis. Ulcers may sometimes be thus detected also, but, excepting syphilitic ulcers, they are seldom so deep or so marked at the edges as to be perceptible in an examination necessarily so hurried as the one of which we are now speaking.

Auscultation and percussion of the larynx and trachea, though often too much neglected, are, I am persuaded, capable of yielding valuable information regarding the state of the lining membrane of these organs. The stethoscopic signs are

especially worthy of attention. They consist chiefly in varieties of the respiratory murmur, and of the comparative lengths of the inspiratory and expiratory sounds. Râles are often heard in the larynx, but permanent ones are very rare. It is likewise of great importance to ascertain the state of the respiratory murmur in the upper parts of the lungs, because its strength or feebleness bears a direct ratio to the obstruction in the larynx. The tones of the voice and the sound of the cough through the stethoscope placed over the thyroid cartilage, should likewise be noted, as indicating the thickness and entireness of the valves of the glottis. I grieve to think that, so many years after the masterly remarks of Dr. Stokes on this very subject(*a*), we cannot speak more precisely of the physical signs of chronic laryngitis. The observations of no one person, however extended, can suffice to establish such points of diagnosis, and I have been induced to mention some of them, in the hope that physicians will not only investigate this subject more systematically, but also, that they will publish the results of such investigations more frequently than they have hitherto done.

In the treatment of chronic disease of the laryngeal mucous membrane, I place my chief reliance on topical applications to the parts affected, but I do not undervalue or neglect more general measures. Indeed, I should despair of curing the local affection if the health of the patient were unattended to, if exertions of the voice were persisted in, and if the larynx were not freed from every cause of excitement or irritation.

I do not intend, in this place, to enter at large on the history of topical applications to the larynx. For this I must refer to more systematic treatises. Suffice it here to say, that that plan of treatment is no such novelty as many suppose, and that probably it took its origin from our own distinguished countryman, Sir Charles Bell. In his Surgical Observations he

(*a*) Stokes on the Chest, p. 247.

relates a case in which he employed a solution of nitrate of silver applied to the interior of the larynx with great benefit. His account of the proceeding is as follows:—"I made a small pad of lint," he says, "and attached it to the ring of a catheter wire, and bent the wire so as to pass over the root of the tongue and epiglottis; I dipped the lint in a solution of twenty grains of the caustic to half an ounce of water, and touched the glottis with it in this manner: with the fingers of my left hand I pressed down the tongue and stretched the forefinger over the epiglottis; then, directing the wire along the finger, I removed the point of the finger from the glottis, and introduced the pad of lint into the opening, and pressed it with my finger." MM. Trousseau and Belloc, without knowing, or at all events without acknowledging Sir Charles Bell's practice, used the very same method, but substituted a whalebone rod for the catheter wire, and a piece of sponge for the pad of lint. I confess it remains doubtful, whether Sir Charles Bell passed his instrument through the glottis into the larynx. Trousseau and Belloc tell us, they did not with their sponge and whalebone, but had recourse to an ingenious syringe for that purpose. It is, therefore, due to Dr. Horace Green, to acknowledge that he first declared he could pass a similar instrument to that of Trousseau and Belloc down into the laryngeal cavity. I must say, however, on the other hand, that after trial of various spatulas for holding down the tongue, as recommended by Dr. Green, I have gone back to Sir Charles Bell's plan of introducing the finger upon the laryngeal surface of the epiglottis, and thus guiding the sponge into the rima glottidis. The strength of the solution should vary with the requirements of the case, and it should be applied every day or second day, according to the patient's feelings. After each application a degree of rawness sometimes amounting to positive pain will supervene, and while this lasts no new application should be made; but as soon after its subsidence as convenient it may be repeated with benefit. In fact, the sooner it can be done the

better, for, powerful as we believe the remedy to be, it is often a long time ere any perceptible improvement takes place, especially when the case is one of long standing. It is of great importance that both surgeon and patient be prepared for this before commencing the treatment, else disappointment will infallibly ensue. All attempts on the part of the patient to test the progress of the cure should be for a time discouraged by the surgeon, and he should carefully avoid appearing to expect improvement by asking after the symptoms until he has good reason to believe that they are yielding. Indeed I have seldom found it necessary to ask at all after improvement in such cases, for the patient himself is always fully aware of it when it has occurred, and equally eager to speak of it.

The following case illustrates many of these remarks, more especially the hopefulness of a cure being effected, even when the disease is of long standing; and also the steady perseverance in the use of the means required for the accomplishment of a successful issue during a period in which their efficacy was anything but apparent:

Case V.—A clergyman from the north of Scotland committed himself to my care in January last. Fully six years before he had been attacked by what he considered a common hoarseness, which he disregarded for a time; but, as it grew worse, he at length sought for medical advice. His case seemed a difficult one, and baffled the treatment of the surgeon who ordinarily attended him. He therefore removed from the country, where his parish was situated, into Glasgow, and put himself under my father's care. He was then treated by frequent leeching and blistering; he was put on a mild and continued course of mercury, followed by one of iodine, and latterly he had caustic issues made at each side of the thyroid cartilage. With these kept open, he resided for several winters in the south of England, and never during his whole treatment did he at all exert his voice, but spoke when necessary in an under tone. At length he returned home, having derived little or

no benefit from the means he had employed, and determined to give up all idea of being able to discharge the duties of a clergyman.

His complaint, however, did not become stationary, for he soon found that not only was he unable to speak aloud, but he could not sit for any length of time in a heated or crowded room. He was therefore debarred from attending public worship, and even when in the same room with a few friends, in private, he latterly felt so oppressed that he was obliged to go out into the fresh air now and again to breathe freely.

He was in this state when he visited me on the 6th of January, 1850. He spoke with apparent difficulty, in a low, husky whisper, which in a few minutes became broken and disagreeable. His health was perfectly good, and he had no cough. On examining his throat nothing particular was seen. The mucous membrane was of its usual colour, the palate was not relaxed, and no papules or follicular ulcers were to be discovered.

He complained of a burning pain, and frequently of an intense feeling of dryness in the larynx. The pain was not increased by pressure of the thyroid cartilage from without, but, during the process of applying the solution of caustic afterwards, he often mentioned that it smarted at that spot. Percussion of the larynx and trachea was loud and sonorous; the breath sounds were dry and hissing, and both the expiratory and inspiratory were of equal duration; the voice, heard through the stethoscope applied over the thyroid, had a stifled and sometimes almost a croupy tone, and the cough had a similar character.

I lost no time in commencing the topical treatment in this case, at first with a solution of one scruple of the nitrate of silver in an ounce of water. I permitted him to take exercise daily in the open air, but advised the use of the respirator, as the weather was cold and changeable. I also recommended a blister over the larynx, to assist in diminishing its irritability

and allow me sooner to pass my sponge through the glottis. This was accomplished in two or three days after commencing the treatment, viz., about the 7th or 8th of January, and continued every day, with few exceptions, till the end of the month. He then found himself so much improved as to be able to attend even a crowded church without feeling oppression of breathing as formerly, and without losing his voice, which was greatly improved, though still husky and irregular, *i. e.* incapable of modulation. I continued to touch the interior of the larynx, the glottis, and epiglottis, during the whole of February, every second or third day; and I increased the strength of the solution to two scruples of the nitrate of silver to an ounce of water. By the end of this, the second month of treatment, his sensations were so different, and his voice so much improved, that he considered himself cured. He had for some weeks attended public worship regularly twice every Sunday; a habit which he had been obliged to discontinue during the four previous years of his life. He could now speak or read aloud in an ordinary room without difficulty or failure of voice. His tone was firm and clear, and he modulated his voice as much as he had ever done.

I cautioned him against any excessive use of his voice, but encouraged him to exercise it moderately every day. I recommended him still to use the respirator, and to have his throat touched by some surgeon at least once a week, till his voice was fully restored. Since his return home I understand, through his relations, some of whom reside in Glasgow, that his voice remains strong, and that he is free from his other laryngeal symptoms; in fact, as he begins to use his voice more freely, he finds it better and stronger than he expected.

This case is interesting in many points of view. It shows how long this disease may exist in some persons without the cartilages becoming affected, and almost inclines to the belief that it is an essentially different class of affections which terminates in that manner. It at the same time proves that the

irritability of the mucous membrane is not easily worn out by time, even in the most favourable circumstances; nay, that it at length becomes so aggravated as to resemble asthma in its paroxysms of spasmodic breathlessness. In some cases I have no doubt that this irritability of the larynx, especially if complicated with ulceration of its lining membrane, becomes an exciting cause of true bronchial asthma. I can, at present, offer only one satisfactory illustration of this statement, but I believe that, if inquiry were more frequently made, cases of the kind would be numerous. If the fact were established, it would lead to an important modification both of our prognosis in cases of chronic laryngitis, and of our treatment in cases of asthma.

Case VI.—In the autumn of 1848 a lady, somewhat below middle age, who had for some years been subject to similar attacks, was suddenly seized with a very severe fit of bronchial asthma, the violence of which was subdued in the ordinary way. When she had recovered I observed that her voice was more than usually weak and husky; but was informed that such had been its character for many years. She herself complained to me of a constant pain, of a sharp, lancinating nature, within the thyroid cartilage.

On inquiring into the history of her illness it was found that the patient in early life had been frequently attacked with acute laryngitis, which had ultimately assumed the chronic form, as indicated by the following symptoms, which remained, viz., frequent tickling cough, a weak, husky, and often hoarse voice, and ere long a constant fixed pain in the region of the glottis, combined with an incessant hawking-up of a little muco-purulent matter, sometimes tinged with blood. On carefully examining this lady's chest after the fit had passed away, the loud, sonorous râles, and occasional amphoric breathing, characteristic of partial dilatations of the air tubes, were at once detected; the resonance on percussion was deep and full; the breath sounds in the larynx were harsh and dry.

After a few days occupied in recruiting my patient's strength,

I commenced to touch the glottis with solution of caustic, and was rewarded in due time by the removal of the laryngeal symptoms, and procuring a much longer respite from the asthma than had occurred for many years.

The state of the bronchi, however, remained nearly the same, and after using various remedies with but partial benefit, I united with my father in recommending a change of climate. Our patient, nevertheless, remained in the neighbourhood of Glasgow for about a year without any regular return of the asthmatic paroxysms, though she never wanted a cough and muco-purulent expectoration. Since that time she has resided constantly in the Isle of Wight, where she has again suffered from her old complaint; and it serves to indicate the relief she experienced while in Glasgow from the touching of the larynx with caustic solution, that, upon the occasion referred to, she insisted on a similar treatment being employed.

In cases of purely laryngeal affection the fits of breathlessness and sense of suffocation are very seldom, if ever, so excessive as in the foregoing case; but they are, generally, marked enough to occasion much distress to the patient. They are most severe in those cases in which the glottis is principally affected, whether that be by œdema or ulceration. In the latter case the ulcer may not be upon the glottis itself: but, if in the neighbourhood of that organ, changes of temperature are apt to irritate the sore and excite contraction of the glottis, whereas in the former case the slightest disturbance of the general circulation, as, for instance, sitting in a heated apartment, or entering one from the cold air, immediately increases the previously existing enlargement of the glottis, so as to aggravate the patient's difficulty of breathing. Both these conditions co-exist very often in the same case, and I believe that that of the clergyman, formerly narrated (page 339), was an example of this distressing combination. Nor could I adduce a better instance in proof of the efficacy of the solution of caustic, applied to the

part affected, in removing these prolific causes of pain and anxiety.

One of the most important general instructions that can be given to a patient suffering from chronic laryngitis, is to preserve as perfect a silence as he possibly can; and even when he requires to speak, to do so in a whisper. He will thus avoid the irritation which the use of the vocal organs always produces in some degree, for in whispering the glottis is very little disturbed, and the vibration of the whole larynx, which occurs in common speaking, is diminished to the minimum. The parts are, therefore, in the most favourable state for being cured, and the progress of the case is generally satisfactory or otherwise, just as the patient submits or does not submit to this injunction.

Case VII.—A young lady of delicate constitution, who was engaged most part of the day in teaching music, was suddenly seized, in August, 1849, with very distressing difficulty of breathing, and frequent harsh cough. Whenever she opened her mouth to speak, this cough, which was of a peculiar hoarse, barking character, interrupted her, and, in fact, prevented her from discharging her usual duties. It was this which led her to seek medical advice, for the symptom mentioned had existed, though in a milder degree, for many years. Her voice, when it could be heard, was weak and husky. The act of swallowing was painful, and she had a constant feeling of rawness in the throat and larynx.

On inspection of the fauces, the mucous membrane was found red, and the tonsils slightly swollen. Percussion of the chest was natural, and the respiratory murmur was distinct, though feeble. When the stethoscope was placed over the thyroid, the breath sounds were harsh and whistling; the epiglottis was felt to be curved laterally, and the neighbouring parts were soft and swollen. I ordered an emetic immediately, and when it had ceased to act, a blister to be applied over

the throat. Next day my patient was much improved. The difficulty of breathing and swallowing was gone, but the cough and weakness of voice remained the same. I now commenced to touch the interior of the larynx with a solution of nitrate of silver (one scruple to the ounce); her digestive organs were put in order, and a solution of quina in dilute sulphuric acid was administered. She was likewise encouraged to take out-door exercise as regularly as the weather and her duties would permit, but on no occasion to leave the house without wearing a respirator. Under this treatment, in about fourteen days the cough had diminished in harshness as well as in frequency, the voice had become considerably stronger, and the general health much improved; but she had not recommenced teaching more than a few weeks ere all her former symptoms had returned with increased severity. The topical plan of treatment was again successful up to a certain point; the difficulty of breathing was removed, and the voice became stronger, but the cough still remained, though milder in form, and less frequent in occurrence. During the summer holidays, when relieved from the necessity of daily teaching, still further progress has been made towards a cure, and though all treatment has been suspended for months, my patient remains nearly, but I cannot say perfectly free from her former cough.

I introduce this case here for three reasons:—1st, to show, by its unsatisfactory result, the evil of continuing the exercise of the voice when the larynx is affected by chronic disease; 2nd, to illustrate the occurrence of acute action in a chronic case, a circumstance well known in regard of other diseases, but generally overlooked in estimating the danger to the life of a patient, arising from the presence of chronic laryngitis; and 3rd, to enforce caution in prognosticating as to the progress of such affections. Until our means of diagnosis are more exact, our prognosis must be given with much uncertainty, and our expectations must, consequently, be often disappointed. It must not, however, be supposed that I attribute the duration

of the preceding case to the severity of the disease. Much of it, as I have previously remarked, was due to the continuance of speaking, rendered necessary by the patient's circumstances; and when I became aware of this fact, I at once warned her of its probable effect upon the treatment.

The following case forms an agreeable contrast to the preceding, and illustrates the happy results of nearly complete silence while treatment is being employed for chronic laryngeal disease. In this case the glottis was the chief part affected.

Case VIII.—The subject of it was a young lady, assiduously engaged in preparing herself to become a public singer. She had, I understand, a very fine and powerful voice; but, last January, without any apparent cause, it became stiff and unmanageable. She complained to her master of the difficulty she now felt in the execution of her vocal pieces, but he, unfortunately, encouraged her to persevere in her efforts to overcome it. Such attempts seemed at first to promise success, but they always left her exhausted and hoarse, even in speaking. In this manner she continued for about two months, the disease every day becoming more confirmed, and its symptoms, of course, more aggravated. It was then evident that it would be folly to pursue her present course any longer. She therefore gave up attempting to sing, and retired to the country, where all the usual remedies for laryngitis were tried in vain; and towards the end of March she came back to town, and placed herself under my care.

She complained to me of hoarseness and weakness of voice in speaking, and of inflexibility as well as want of tone in singing. She had a slight degree of pain in the larynx, amounting to a heat or dryness there; but she had neither cough nor any other symptom. Auscultation of the larynx indicated some degree of obstruction at the glottis. The chest was perfectly sound, and the general health was quite good. The appearance of the pharynx was in no way changed.

I immediately commenced the application of caustic solu-

tion to the glottis, and continued it thrice a week. I also recommended my patient to preserve as complete a silence as possible, and, if she did speak, to do so in a whisper. I had every reason to believe that she submitted strictly to this injunction, and she was rewarded by the result, for her voice was restored to its former purity about the 8th of April, when she returned to the country. Having, however, foolishly exposed herself to cold and wet soon afterwards, she suffered a relapse of her former symptoms. She therefore again came to town and submitted to a similar treatment and regimen ; and it was not till the end of May that her voice had once more resumed its natural tone and power.

The insidious nature of the commencement of these chronic affections of the glottis is one of their most remarkable features. When the patient is not much in the habit of using his voice, except in common conversation, they have generally made much progress before they are noticed, and sometimes they show themselves very suddenly and in a most formidable shape. It is very likely that the occurrence of an acute aggravation of the malady is the true explanation of most of these cases. There are several of the kind on record, but as they are by no means common, I may mention the following.

Case IX.—One evening last winter, a railway porter had occasion, in the exercise of his duties, to call aloud to one of his fellows, when suddenly his voice failed, so that he could not raise it above a husky whisper. He applied to me about six weeks after this occurrence, and he still spoke in the same under-tone. He breathed quickly and with apparent difficulty, each inspiration being accompanied by a harsh and almost stridulous sound. He had, however, no positive pain, but only a feeling of tightness in the larynx. On cross-questioning him, he admitted to me that his voice had been weak and slightly hoarse for some time prior to its sudden and complete failure.

The fauces and back of the pharynx were red and relaxed.

The thyro-epiglottidean folds, and other parts of the mucous membrane on a level with them, felt soft and swollen to the finger. The inspiratory sound, as heard through the stethoscope placed over the thyroid, was harsh and rough; the expiratory was long and whistling.

I ordered this man an emetic, and eight leeches to be applied over the thyroid cartilage, and next day I commenced touching the pharyngo-laryngeal membrane with a solution of a scruple of nitrate of silver in an ounce of water.

In ten days he was able to resume his work, but I cautioned him not to exert his voice above what was absolutely necessary. He nevertheless returned to me in about a month, almost as bad as ever with the same disease. He said his occupation had rendered it impossible for him to use the precautions I had enjoined. A blister to the throat, and the topical application repeated steadily for other eight or ten days, again restored the voice, and I have heard no more of my patient.

There is a class of cases in which the inflammatory irritation seems to be confined to the epiglottis alone. In them the voice is not at all affected, and there is no very remarkable cough. An incessant hawking, and a constant liability to choke in swallowing, are the most marked symptoms, and they, although at first apparently of little moment, sometimes increase to such an extent as to constitute a very troublesome and painful disease.

Case X.—Some time ago, a middle-aged lady consulted me for what she thought a tightness in the throat. She described this as being so bad in the morning that she had not been able to breakfast with any degree of comfort for about a year; so constant was the failure of the epiglottis to protect the opening of the larynx, and so irritable were the valves of the glottis itself. Fluids, as she said, went constantly "into the wrong throat," and both frightened and annoyed her exceedingly, so that she could hardly think at length of sitting down to a meal.

Her health otherwise was quite good, and she at once submitted to the topical application which I proposed to her. I endeavoured in this case to bathe the epiglottis chiefly with the caustic solution, and soon succeeded in removing its excessive irritability, which had occasioned her so much uneasiness.

I have hitherto confined my remarks to cases of uncomplicated chronic laryngitis. It is, however, a well-known fact, that that disease is a frequent attendant on pulmonary affections, especially phthisis. Now, although in such cases the latter disease, and not the former, is that which threatens the life of the patient, and therefore deservedly engrosses chief attention, yet there are certain cases in which, by the alleviation or removal of the laryngeal affection, we are able to greatly mitigate the distress of our patient. I have formerly given a case (No. vi.) of asthma, in which a temporary cure was accomplished by this means; and I could add many others belonging to the still graver class of phthisical patients.

Some may, perhaps, think, as I myself at first did, that this practice would be dangerous in cases of the last-mentioned disease; but I have now employed it in all stages of that malady, with more or less benefit in each case, and with injury to none. It will at once be admitted, after the cases already given, that in the early stage of phthisis, when it commences with a tickling, laryngeal cough, and perhaps occasional vomiting, the topical application of solution of caustic may be likely, as I know it is capable, of greatly diminishing for a time the irritability of the glottis and its neighbouring parts. But it may surprise some when I state the utility of the same means in some cases of acute hemoptysis.

Case XI.—A young gentleman of stout habit, but of a phthisical diathesis, was suddenly seized with violent hemoptysis, for which he was bled from the arm, and received other appropriate treatment, medicinal as well as regiminal; nevertheless, a frequent, hacking cough continued, and seemed to

cause an almost constant expectoration of small quantities of blood. Thinking that this might be partly occasioned by irritability of the upper portion of the windpipe, I proposed to try the effect of a cautious application of the solution of caustic; and after warning him, if possible, to avoid permitting himself to retch, I did introduce the probang down to the epiglottis. I repeated this day after day, and more freely as I proceeded with impunity. In a short time I had the satisfaction of finding that the cough was removed, and with it the spitting of blood.

Even when there is a profuse purulent expectoration from one or more tuberculous abscesses in the lung, topical applications to the larynx may be used with benefit. There are no cases, it is well known, in which ulcers more frequently occur in the laryngeal mucous membrane than those just adverted to, and hence much of the pain and distress presented by them. To alleviate these symptoms most speedily and most effectually, the caustic solution must be applied to the interior of the larynx ; and I am able to say, from considerable experience, that the remedy is as safe as it is sure. The following was the first case of the kind that occurred to me.

Case XII.—The subject of it, a lady about thirty years of age, had laboured under unequivocal symptoms of pulmonary phthisis for some time previously to my seeing her; and when I examined the chest I found evidence of a considerable abscess at the upper part of the left lung. She complained of the frequency of the cough, and of constant pain within the thyroid cartilarge; her voice was husky, and she was subject to vomiting. Alternations of temperature had great influence on the cough and voice. The expectoration was profuse and purulent, but never bloody.

I had treated this lady's sister, by the topical method, for a simple laryngeal cough, and had succeeded in curing it. She was therefore very naturally impressed with the idea that benefit might also accrue in her case from a similar treatment,

and urgently requested me to try it. I did so with some reluctance, but have had no reason to regret the result. The immediate effects of the application were not severe, and the benefit which followed was soon obvious; for as the irritability of the pharyngo-laryngeal membrane diminished, the cough became less frequent and less easily excited by change of temperature, the voice improved, the pain in the larynx decreased, and the vomiting became much less troublesome.

The mere removal of a group of distressing symptoms was not the full extent of the alleviation obtained in this case; for since that has been accomplished, the pulmonary abscess has not increased, while the general health and vigour have greatly improved; so that instead of the daily and visible progress of a rapid consumption, this patient enjoys prolongation of days and comparative health.

I am very far from claiming for the topical treatment of *laryngeal* disease the much-to-be-desired power of curing *pulmonary* phthisis, but I believe it capable of effecting much greater relief to most sufferers from that dreadful malady than all the farago of artificial atmospheres, inhalations, cough mixtures, &c., or even than the much-used respirator. In the early stage of phthisis the measures just mentioned are often, in my opinion, more hurtful than beneficial, interrupting as they do the general hygienic regimen which ought then to be pursued; and in later periods of the disease, in which some of them might with propriety be employed, topical applications to the larynx will often be found too efficacious to be altogether overlooked or laid aside.

Art. XIV.—*Observations on Chronic Dysentery.* By R. Mayne, M. D., F. R. C. S. I.; Physician to the South Dublin Union Workhouse, and Lecturer on Anatomy and Physiology at the Carmichael School of Medicine.

Having in a former paper in this Journal(*a*) given a brief sketch of the late epidemic dysentery, as it fell under my observation in its acute form, I purpose in the present communication to notice some of the more remarkable complications which arose in the chronic variety of the disease. I shall not dwell at any length upon the symptoms or the pathology of chronic dysentery; both are, unfortunately, but too well known to the profession in Ireland, and neither of them presented in the late epidemic any features of novelty.

In several cases *venous inflammation* appeared as a complication of dysentery: in some patients it assumed the form of the adhesive phlebitis, seizing upon the iliac veins and sometimes even extending to the inferior cava itself. A painful tumefaction of the corresponding lower extremity, presenting all the characters of phlegmasia dolens, was the constant result of this inflammation. In a few dysenteric patients the venous inflammation assumed the suppurative type, or at least the characteristic constitutional disturbance of suppurative phlebitis set in unexpectedly in the progress of dysentery, and was soon followed by purulent deposits in remote parts of the system, with a rapidly fatal result.

It was remarked by my colleague, Mr. Shannon, and myself, that the adhesive phlebitis, producing as it invariably did painful œdema of the lower extremity, occurred exclusively in the *chronic* dysentery, and that it generally attacked persons who had for many weeks been suffering from bowel irritation. The first symptoms usually noticed were severe pain either along the course of the femoral vessels in the groin, or at the

(*a*) New Series, vol. vii. p. 284.

back of the hip-joint, where the sciatic nerve emerges from the pelvis through the great sciatic notch. Sometimes the first uneasiness was referred to the calf, or even to the front of the leg. In one case the severity of the pain and its situation behind the hip-joint caused the complaint for many hours to bear a striking resemblance to sciatica; and in another the patient was first seized with intense pain in the left lumbar region, immediately beneath the kidney, which, however, quickly extended down to the corresponding groin, in the track of the external iliac vessels.

In the majority the limb became at once almost powerless to support the weight of the trunk, every attempt to assume the erect position causing a bursting sensation along the course of the vessels and an indescribable amount of suffering. Even in the early periods a careful examination of the limb seldom failed to detect marked tenderness upon pressure in the line of the femoral vessels, from Poupart's ligament to the opening in the triceps, through which the vein and artery both pass into the popliteal space. A hard, dense cord, traceable by the fingers, afforded also sufficient evidence of the changes going on within and around the inflamed vessel, whilst the pulsations of the artery were uninterrupted, showing that the vein, not the artery, was chiefly affected. As the disease progressed the various superficial tributary streams, such as the superficial epigastric vein, the superficial circumflex ilii, the great anterior saphena, &c., became remarkably turgid, and by their blue colour gave timely notice that the main channel was obstructed; whilst at a later period the hard, whip-cord-like feel of these vessels abundantly proved that the inflammation had extended to their own parietes.

The swelling which quickly ensued was highly characteristic; unlike ordinary œdema, it seized at once upon the entire extremity, pitting imperfectly on pressure; the circumference of the limb, wherever examined, was found to be at least double that of the corresponding portion of the opposite one. Added

to these symptoms there was at first a decided increase in the temperature of the limb, with marked tenderness upon pressure wherever it was examined; whilst at a later period, when all inflammation was at an end, the enlargement yielded slowly to treatment, weeks sometimes elapsing before any notable diminution took place in the unwieldy member.

It was remarkable that both lower extremities were seldom affected simultaneously; yet, when one of them suffered, the other was very generally attacked at a subsequent period, and it constantly happened that the second attack was traceable to renewed irritation in the large intestine. One patient in particular appeared to have recovered thoroughly from dysentery and phlegmasia dolens of the left lower extremity, when the dysenteric stools recurred, and were followed after a brief interval by painful tumefaction of the right leg and thigh, parts which had escaped perfectly during the former visitation.

As to treatment; most of the patients were already much exhausted by severe dysenteric symptoms, before the venous inflammation set in, and great difficulty was therefore experienced in the choice of remedies. Marked relief was, however, in general, produced by local depletion in the immediate vicinity of the inflamed veins; and thus leeches to the groins and along the course of the femoral vessels proved very effectual. In one case already related, where the pain was referred to the great sciatic notch, cupping the gluteal region was found most beneficial. In this instance, the large veins from the hip and thigh, which here enter the pelvis to throw themselves into the internal iliac veins, were doubtless inflamed, which accounts for the peculiar locality of the pain, and also for its relief by the treatment adopted.

Warm fomentations, and a due attention to the position of the limb, by raising it so as to favour the venous circulation, were exceedingly serviceable. Mercury, exhibited so as to touch the gums moderately, was followed in many instances by a favourable result, as it appeared to possess considerable powers

in controlling the inflammation; but as a prophylactic it was unquestionably a failure, for more than once the right lower extremity was attacked, whilst the gums were still sore from the mercury administered to subdue phlebitic inflammation in the other.

After the acute symptoms had subsided, iodine frictions and the careful application of flannel rollers seemed to hasten the cure; but, under every variety of treatment, the recovery was tedious.

When death ensued, this event was attributable not so much to the venous inflammation as to the unmanageable disease with which it was associated; and so fatal was the accompanying dysentery that many opportunities occurred for examining after death the inflamed veins. The great venous trunks of the diseased limb, viz., the internal iliac, the external iliac, and the femoral, presented in every case, without exception, the well-known characters of adhesive phlebitis; in some, the popliteal, the profunda, the gluteal, and the sciatic, were likewise affected, and in a few the disease had extended to vessels of a still smaller caliber, the anterior and the posterior tibials, the anterior saphena, the epigastric, and the circumflex ilii, superficial and deep, being involved in the inflammation.

The cavities of the affected vessels were filled with coagula, which adhered to the lining membrane, and varied in colour and consistence according to the duration of the disease. When the inflammation was recent, the coagula retained more or less of the colouring matter of the blood; at a subsequent period, the colouring material seemed to have been partially absorbed, and then, these concretions consisted of tough, dingy fibrine, intimately adherent to the venous tissue; whilst at a still later date all traces of red colour had disappeared, and the parietes of the veins were so perfectly amalgamated with the contained coagula, as to defy all attempts to separate them.

In no case had any effort been made by nature to re-esta-

blish the circulation through the diseased vessels, by the formation of new channels either in the centre or along the surface of the coagula; on the contrary, the cavity of the vein was always completely plugged by the concretion, which latter always proved to be a perfectly solid cylinder.

In reflecting upon the extraordinary amount of obstruction revealed by dissection (an obstruction which sometimes affected simultaneously the main channels of the limb up to the very cava itself, as well as the second and third-rate veins, both deep and superficial), an anatomist might well feel at a loss to conjecture how the circulation had been maintained, and be almost excused for doubting the possibility of a cure; whilst all surprise at the slowness with which such cases usually recover would be for ever banished from his mind.

The coats of the inflamed veins were found remarkably thickened; instead of the thin semi-transparent appearance which belongs to them in the healthy condition, they were opaque and tough, so as to be with difficulty distinguishable from the accompanying artery, to which, in general, they closely adhered. The lining membrane also had lost its peculiar polish, and was frequently blood-stained, but without any arborescent vascularity.

Looking to the rectum as the principal source of the irritation, and recollecting that some of the veins of that intestine run into the internal iliac, I at first expected to find, in every case, the inflamed veins traceable to the walls of the gut; in this expectation, however, I was disappointed, for although occasionally one or more of the inferior or middle hemorrhoidals presented all the characters of the adhesive phlebitis, yet in the majority the veins of the rectum, down to the very verge of the anus, were found perfectly healthy, although the trunks of the iliac veins were at the same time absolutely impervious from inflammation. It is also particularly worthy of remark that when any of the lower hemorrhoidal veins were found inflamed, many other tributaries of the internal iliac vein were

in precisely the same condition; the uterine, the vaginal, the vesical, &c., were in such cases filled with adherent coagula, and were equally impervious (that is to say they were equally inflamed) with the hemorrhoidals.

Judging from several carefully conducted dissections, I would say that the route by which the inflammation travels in these cases is not by any means constant, and that even the starting point of the inflammation is not uniformly the same. In some, it apparently commenced in one or more of the tributary streams running into the internal iliac vein, and from thence extended *in the line of the circulating current* to the trunk of the internal iliac, the common iliac, and the cava, and *in a retrograde direction* to the external iliac, the femoral and its numerous tributaries, and even to the gluteal and the sciatic veins external to the pelvis. In others the inflammation originated about the confluence of the internal, the external, and the common iliac veins, from which as from a centre it radiated. In a third class of cases the trunk of the internal iliac vein was the first attacked.

It was no very difficult matter in general to determine the *point de départ* of the inflammation, as this was sufficiently indicated by the greater solidity of the coagula, their comparative deficiency in colouring material, their more intimate adhesion to the lining membrane of the vein, and, in a word, their more perfect organization.

The close proximity of the rectum, the sigmoid flexure of the colon, and the cæcum (parts which in chronic dysentery are always extensively diseased), to the iliac veins on either side, may, perhaps, sufficiently account for the readiness with which these vessels take on inflammatory action; but whether this be the true explanation or not, certain it is that the inflammation often *originates* in the trunks of the iliac veins. The excessive irritation of the large intestine in dysentery may excite adhesive inflammation in the neighbouring venous trunks; but in these cases the phlebitis does not necessarily,

nor even generally, commence in the veins of the diseased intestine.

This result of repeated examinations is, after all, what might be expected on theoretical grounds; for most of the venous blood of the large intestine finds its way into the vena portæ, and a small proportion of it comparatively, and that from the lower part of the rectum only, reaches the internal iliac vein; so that, on anatomical principles, phlebitis affecting primarily the veins of the large intestine ought to extend to the vena portæ more frequently than to the internal iliac.

I am fully aware that other observers have also noticed painful tumefaction of the lower extremities as a consequence of dysentery. Dr. Cheyne, in the Dublin Hospital Reports, vol. iii., in describing a former epidemic, says:—"It is worthy of remark, that a swelling occurred in several patients, both male and female, resembling the phlegmasia dolens in every respect, but in its connexion with parturition." When Cheyne wrote, however, the pathology of phlegmasia dolens was unknown, and he therefore does not appear to have suspected that the swellings in question were the result of phlebitis. To Dr. Lee is justly due the credit of having been the first to describe the true pathology of phlegmasia dolens(*a*); he was also aware that a similar disease occurs in the male subject in connexion with dysentery, but from the tenor of his observations it would seem that he considered the inflammation to arise in all such cases primarily in the veins of the intestine.

Suppurative Phlebitis.—Of this variety of the disease only a few examples occurred. The symptoms, however, in all of them were so characteristic, that I entertain no doubt whatever of their nature; although, as often happens in such cases, dissection failed to point out satisfactorily the particular veins in which the inflammation originated.

(*a*) See Medico-Chirurgical Transactions, vol. xv. 1829; also Cyclopædia of Practical Medicine, Art. "Phlegmasia Dolens."

The suppurative phlebitis, unlike the former variety of venous inflammation, appeared as an *early* complication of dysentery, having shown itself in every instance whilst that disease was still in its acute stages. The patients in whom it occurred were invariably affected with dysentery in its worst form, as was abundantly evident by their intense sufferings from the very outset of the disease, as well as by the peculiarly offensive nature of their dejections. The complication in question usually arose some time from the fifth to the twelfth day, and was ushered in with severe rigors, followed by great constitutional disturbance: the pulse rapidly rose to 130 or even 140 in the minute; the countenance became excessively anxious; and rigors, followed occasionally by profuse sweatings, recurred at irregular intervals.

One woman, after presenting these formidable symptoms for eight and forty hours, was suddenly seized with intense pain in the region of the liver, accompanied by slight jaundice and very considerable dyspnœa. After a further interval of many hours, the pain seemed to have shifted to the neighbourhood of the seventh and eighth intercostal spaces, the respirations amounting to forty-four in the minute, and the pulse to 140. On exploring the chest a distinct pleuritic frottement, accompanied by obscure bronchial respiration and crepitus, showed that the right lung, with its investing membrane, had been attacked. The tongue now became dry and brown; the teeth were covered with sordes; there was some delirium; the respiration was very much embarrassed; the dysenteric stools still persisted; the features became altered; and she died finally on the sixth day from the development of the new train of symptoms.

At the *post mortem* examination a considerable portion of the lower lobe of the right lung was found to be solid, and of a dark purple hue. In colour it resembled nothing so much as the healthy spleen; its surface was roughened by recent lymph, but the quantity of false membrane present was scanty.

Four or five whitish or cream-coloured masses, varying from the size of a large pea to that of a marble, were situated at the base of the lung; in colour they contrasted remarkably with the splenified lung in which they were imbedded: when incised they were found to contain pus. In the right lobe of the liver, and near its posterior margin, there were three small abscesses perfectly isolated, and surrounded by glandular structure which was apparently healthy. Between the diseased portions of the lung and of the liver, the diaphragm alone was interposed. The large intestine from the cæcum to the anus was found in a state of extreme disorganization; its coats were thickened; its contents consisted of a greenish fluid, without any traces of true fæces, and of an abominable odour, almost approaching that of gangrene. The mucous membrane was extensively ulcerated; some of the ulcers seemed to have penetrated deeply into the walls of the gut, but there was no absolute perforation. The veins of the large intestine were examined with care, but I was unable to detect in any of them satisfactory evidences of inflammation.

Another girl, aged 29, was seized, on the fourth day of a second attack of acute dysentery, with a very severe rigor, followed by sweating, and a train of symptoms indicating high constitutional disturbance. Three days subsequently she complained of severe pains in the left elbow and in the right knee joints. On examination these articulations were found exquisitely tender to the touch or upon the slightest motion; there were also considerable puffiness in the neighbourhood of the affected joints, and some increase in the temperature of the integuments over them, but there was little or no redness. This girl had raved incessantly during the preceding night, and she was now so deaf that very great difficulty was experienced in getting her to comprehend questions. The respirations were hurried, from thirty-five to forty in the minute; the pulse was 130; and the skin felt unusually hot and dry to the touch.

Next day she was reported to have had a severe rigor during the night, followed, towards morning, by profuse perspiration. The dysenteric symptoms had continued unrelieved by treatment, no less than twelve stools having occurred from bed-time. She suffered much pain in the affected joints, so much so, that her screams during the night were distressing. Her skin was now of a yellow, dingy colour; the left elbow was flexed and swollen, and exhibited a dusky red patch of inflammation over the radio-humeral articulation; the right knee was swollen and exquisitely painful, but without any inflammatory blush: she complained also of pain in the left side, corresponding to the seventh and eighth intercostal spaces.

On the fifth day there was pain in the joint between the metatarsal bone and the first phalanx of the great toe of the left foot; there had been no rigors during the night, but her sweatings were profuse. She had a sunk look; her tongue was red and dry; the teeth were covered with sordes; the stools were still dysenteric and passed involuntarily.

On the sixth day she was apparently moribund; a mucocrepitant râle was heard over the lower and lateral part of the left lung; the pulse was intermitting, and about 160 in the minute. She died on the following night.

The *post mortem* examination took place twelve hours after death. On removing the calvarium, the dura mater appeared exceedingly vascular. It was covered with a profusion of bloody dots, and its veins in particular were remarkably turgid. A considerable deposit of pus was found between the dura mater and the mastoid process of the right temporal bone, in the course of the great lateral sinus. The dura mater was here fairly separated from the bone by the matter. There was no evidence whatever of any pre-existing disease in the bone, nor did the neighbouring sinus, although most carefully examined, display any appearance of inflammation. There were black coagula of soft consistence in the great lateral sinuses

and in the internal jugulars at either side of the neck, but these concretions did not adhere to the lining membrane.

In the pericardium a quantity of thin yellowish pus was found, and both the visceral and the parietal layer of this membrane presented intense arborescent vascularity. Of the lungs, the right was healthy; the lower lobe of the left was completely splenified: this portion of the organ was likewise remarkably soft and friable. When incised it exhibited eight or ten spots the size of split peas, out of which pure pus exuded on compression.

In the abdomen the large intestine was found diseased from one end to the other. Its mucous membrane presented every where the most extreme vascularity, but as usual the inflammation was most intense in the rectum and in the sigmoid flexure of the colon. From the cæcum to the anus the lining membrane was everywhere so soft that the slightest force by the nail was sufficient to detach it from the subjacent tissues. There were likewise several ulcers in different parts of the large intestine. These ulcers were solitary, their surfaces were sloughy, and the deepest and largest of them were situated in the upper part of the rectum; the small intestine was healthy; the liver was soft and friable, but it contained no pus; the gall-bladder contained a moderate quantity of greenish bile; the kidneys, spleen, and uterus were healthy.

The right knee-joint contained a large quantity of thin yellowish pus, but there was no softening or abrasion of the cartilages of incrustation. The synovial membrane over the front of the lower part of the femur was very vascular, but the vascularity could not be traced over the cartilages. There was also purulent matter in the left elbow-joint and in the metatarso-phalangeal articulation of the great toe of the left foot.

The veins of the large intestine were carefully examined, but without affording satisfactory evidence of inflammation.

The two cases here briefly related may be taken as good specimens of the class they are intended to exemplify. That in

each of them pus had entered the circulation, poisoned the blood, and determined the formation of local abscesses, will probably be admitted, whether with Cruveilhier we attribute the phenomena to phlebitis, or, with Velpeau and others, we admit *la doctrine de la résorption et de depôt de pus.*

The large intestine, containing, as it often does in dysentery, remarkably fetid secretions, with its lining membrane softened, eroded, and sometimes semi-gangrenous, and with its walls more or less extensively ulcerated, would certainly appear to realize the conditions most likely to excite suppurative inflammation in the veins which take up the blood from its parietes; and it therefore seems exceedingly probable, although not actually proved by demonstrative evidence, that a phlebitis of some of the rectal or the colic roots of the vena portæ was the source of the constitutional disturbance, as well as of the local suppurations observed in the cases above described. Dr. Budd(*a*) has ably argued in favour of this view of the source of hepatic abscesses, when associated, as they often are in hot climates, with dysentery.

Amongst the complications of chronic dysentery *a peculiar form of dropsy* was certainly the most remarkable; by it many patients were cut off in a very unexpected manner, effusions into the serous membranes, or into the parenchyma of important organs, having suddenly taken place. At first the novelty of these cases attracted uncommon attention, but they soon became so frequent that their occasional occurrence was looked for almost as a matter of course.

A slight puffiness of the eye-lids, with an œdematous condition of the feet, were usually the earliest symptoms, and when these were once fairly established the patient was no longer safe from internal effusions. Of the serous membranes the arachnoid most frequently suffered; the pleuræ came next in

(*a*) See Diseases of the Liver, p. 61, by George Budd, M. D. London, 1845.

the order of frequency; the pericardium was more rarely affected; and the peritoneum almost invariably escaped.

The comparative immunity from effusion which the peritoneum enjoyed, appears to be a very remarkable circumstance in the history of this dropsy, particularly when it is recollected that the large intestine, the special seat of dysentery, is extensively covered by that serous membrane.

The symptoms which ushered in the cerebral effusions exhibited considerable diversity in different cases; very frequently death occurred with all the indications of an apoplectic seizure, the patient having become unexpectedly stupid and lethargic, a condition which was soon followed by stertorous breathing, total insensibility, and death. Many who appeared tolerably well and perfectly rational at bed-time, were observed to breathe heavily during the night, and became completely comatose before morning. The sudden and unexpected manner in which death thus occurred was the cause of much anxiety until repeated dissections showed the true nature of these cases.

In some patients marked cerebral excitement, characterized by a singular train of symptoms, preceded for days the fatal event. In a few, aberration of intellect, and even maniacal symptoms, were the precursors. Some became unexpectedly morose and taciturn, answering in monosyllables, and in the gruffest manner; this was soon followed by more decided indications, such as a constant rocking motion of the head, or severe and fatal general convulsions. Others again laboured for many days together under strange mental illusions, which ended in stupor or convulsions, the certain forerunners of death. Many who had been discharged apparently convalescent from the dysentery wards were brought back after a few days with œdematous feet, and more or less impairment of the mental faculties. The ward-masters complained that they wandered about the house in a state bordering on fatuity. When questioned their answers were slow and incoherent; they forgot

what they had said a few minutes previously; their speech was often thick, and their memory and reasoning powers were defective. Some of them would repeat the same words constantly in the most unmeaning manner, whilst others would reply to all questions in precisely the same words, often without any reference whatever to the queries put to them. These latter symptoms often occurred in persons beyond the middle periods of life, and were a sure indication that still more serious consequences were impending.

Few of these patients complained directly of the head, indeed there was in general a remarkable absence of pain in the affected organ; nor were there any symptoms to denote the existence of inflammation, or even of congestion of the brain. The scalp was neither unduly vascular nor hot; the conjunctiva was bloodless; the pupils were regular, and equally obedient to the influence of light. In one or two instances the pupils were contracted to the size of a pin's point, but these were evidently exceptional cases. The special senses were unimpaired, nor was there any paralysis.

In the end the pathology of all these brain affections was found to be pretty uniformily the same. Extensive serous effusions always existed, not only in the sac of the arachnoid, but also in the ventricles, in the subserous tissue at the base of the brain, and deeply in all the sulci, even those seated on the convexities of the cerebral hemispheres; in fact the disease was, in the fullest sense of the word, a dropsy of the arachnoid.

In the removal of the brain from the cranial cavity, an unusally large quantity of limpid serum always escaped. On laying the organ aside for even a few minutes, the table on which it stood was sure to be deluged by the draining of a similar fluid from the subserous spaces; and on stripping off the membranes from any part of the surface of the hemispheres, quantities of serum flowed out from each sulcus as it was exposed.

In no instance was lymph any where detected. In the ma-

jority the cerebral substance appeared healthy. In a few cases there was a sort of general softening of the organ, nothing like a defined ramollissement of any particular part of the encephalon, but a diminished consistence of the entire, sufficient to render the freshest brain unfit for anatomical purposes.

As a general rule there was no increased vascularity within the cranium; but in a very small proportion of the bodies examined, the veins of the dura mater were slightly congested; and the pia mater on the convexities of the hemispheres exhibited large vascular patches, which looked as if the parts had been daubed with florid blood. This hyperemia was scarcely sufficient to justify the inference that it was inflammatory, at most it seemed to be akin to certain passive forms of inflammation known to occur in states of the constitution which forbid depletion.

When the chest was about to become the seat of the dropsical effusion, a short cough and slight dyspnœa generally gave timely warning of what was impending. In such cases the patients themselves were often little conscious of their approaching dissolution, their attention being altogether absorbed by the irritation of the bowels; death, nevertheless, frequently ensued with extreme rapidity, the hydrops pericardii, or the hydro-thorax, proving fatal as rapidly as the cerebral effusions above described.

Sometimes the chest symptoms predominated for days before death, the breathing being extremely embarassed, and the sense of suffocation imminent.

In one case effusion set in with such frightful rapidity that death seemed to be inevitable. The stethoscopic signs of pleural effusion were however so evident, that in consultation with Mr. Shannon, it was determined, as a forlorn hope, to try paracentesis. The operation succeeded beyond expectation; a very large quantity of perfectly limpid serum was withdrawn by him from the left side of the thorax; immediate relief was the consequence, and the girl even recovered temporarily from

the dysentery, although she died in some months afterwards from the effects of a relapse.

The morbid appearances presented after death in this latter class of cases were pretty uniform. Limpid serum in large quantity was found in one or both pleural sacs, or in the pericardium, and the lungs, usually healthy in structure, were more or less compressed by the liquid contents of their serous membranes. Sometimes the pulmonary tissue was itself the seat of extensive œdema; the specific gravity of the lung was then much increased; it collapsed very imperfectly when the chest was laid open; its parenchyma was friable; and when incised, a surprising quantity of frothy, blood-tinged serum exuded from its cut surface, as if from a sponge.

Another very remarkable complication of chronic dysentery which I had many opportunities of witnessing was a singular variety of *spontaneous salivation;* it appeared only in cases of extremely protracted dysentery; and when present, it seemed to supersede every other symptom. On inquiry, the persons in whom it occurred were always found to have been for months, sometimes for many months, suffering from dysentery. Most of them complained of soreness of the mouth, simultaneously with the salivation; and on inspection, the cheeks, gums, and palate appeared slightly reddened, and the tongue morbidly clean, red, and tender; but there was no fetor of the breath, no ulceration or swelling of the gums, the tongue, or the cheeks, nor were the teeth ever loosened. The quantity of saliva discharged in these cases was sometimes enormous, amounting to two, three, or even four pints in the twenty-four hours, and continuing at that rate for weeks together.

This salivation often assumed a periodic character, ceasing spontaneously in the morning, to re-appear about 2 or 3 o'clock, P. M., and to persist throughout the entire night.

I have in many instances known it to alternate with head symptoms, ceasing suddenly on the supervention of delirium,

convulsions, or maniacal indications, and re-appearing after an uncertain interval of time, with manifest relief to the brain. Sometimes this flux plainly alternated with profuse bowel discharges, and it even occasionally seemed to supersede and replace the œdematous condition of the extremities.

With some of the patients who suffered from this distressing sequela, mercury had been tried unsuccessfully many months previously; some had used no mercury, if their own statements were to be credited, and none certainly had been administered to them whilst under my care, as the disease was too far advanced for the mercurial treatment at the time of their admission into hospital. In no case was the patient taking mercury at the time of his seizure, nor had any of them for a considerable period before the salivation commenced made use of any mercurial preparation.

This flux evidently belongs to the same category with the dropsical symptoms already noticed; like them it occurred in the advanced stages only of chronic dysentery, and with many of those dropsical symptoms it actually alternated. Thus, when the salivation was profuse, there were no indications of cerebral effusions, and chest symptoms were absent; but no sooner had the discharge from the mouth ceased suddenly than marked determination to the arachnoid, or to other serous surfaces, arose.

A review of the entire of these complications shows that there was no single organic source to which they could be referred. The most minute examination of the kidneys failed to display the slightest appearance of disease in these organs. The heart was always healthy, at least it was free from any valvular disease or other lesion likely to obstruct the circulation, although it participated more or less in the general atrophy of the entire system. The salivary glands were more than once dissected with the greatest care, but the pancreas proved to be perfectly healthy, and the parotids, the submaxillaries, and the sub-linguals, afforded no satisfactory ex-

planation of the excessive discharges which had emanated from them during life. An anatomist would probably have said that they were less plump, and even paler than natural.

The liver alone, of all the glandular organs, was invariably diseased. It was usually soft enough to tear on the application of the slightest force, so that much difficulty was oftentimes experienced in removing it unruptured from the body; in this condition the fingers readily passed through its parenchyma, which, although perfectly fresh, broke down as if in an advanced stage of putrefaction: conjoined with this softening there was often extreme congestion of the liver. Under these circumstances the gland was gorged with black fluid blood, which flowed out in excessive quantities when the parenchyma was torn or incised. The softened condition of the liver was nearly constant, not so, however, the congestion; for, on very many occasions where even moderate pressure would have reduced the gland to a pulp, it appeared pale on the surface and almost bloodless when divided.

These organic changes in the liver can scarcely be held to have had any concern in producing the effusions, seeing that the liver was thus altered in almost every case of very chronic dysentery, whether dropsical symptoms were present or absent; and that, of all the serous membranes, the peritoneum alone was seldom or never the seat of effusion, although ascites is the form of dropsy most likely to be the result of hepatic disease.

To an altered condition of the blood we must, I think, attribute the cause of the mischief, for it is scarcely too much to suppose that this vital fluid becomes changed in its properties by the lengthened disturbance to the digestive processes and the consequent defective nutrition inevitable in every case of protracted dysentery. To produce healthy secretions in proper quantity, not only must the secreting surfaces be healthy, and the circulating organs free from obstruction, but *the materials out of which the secretions are elaborated must retain their natural*

properties; that they do so in chronic dysentery may well be doubted.

When the dropsical stage of dysentery has fairly set in the time for successful treatment has well-nigh elapsed. This stage may be prevented, it is but rarely cured. Some cases undoubtedly there are where the disease, from the very outset, is of so bad a type that the most judicious management fails to be of the slightest avail, but in a vast majority, dysentery commences with acute symptoms, which are readily enough subdued if energetically treated, and which gradually merge into the chronic form when neglected.

Later experience enables me to add but little to the *treatment* recommended for acute dysentery in a former communication(*a*), and therefore I shall here merely state that my confidence in the plan of treatment there detailed, but more particularly in the mercurial treatment, remains unshaken.

Chronic dysentery must be considered a very unmanageable disease; treat it as we may, the result is often unfortunate, few complaints being more intractable. I have no specific to recommend, nor do I believe that any such remedy has hitherto been discovered. Mercury, so powerful an agent in the *acute* disease, seldom fails to aggravate the *chronic*, whether used by the mouth or by inunction. Of most of the metallic tonics and astringents I must speak in doubtful terms. Nitrate of silver, sulphate of copper, and the trisnitrate of bismith, variously combined, were fairly tried, and finally laid aside as being uncertain in their effects, although occasionally useful. The pure astringents were scarcely more successful. Logwood was a signal failure, so was tannin, so was acetate of lead, and I may say the same of matico, and other remedies of that class. The turpentines, no matter in what combination, were seldom borne by the stomach. Opium, although absolutely requisite for the relief of pain and irritation, yet proved wholly inadequate to

(*a*) Dublin Quarterly Journal, N. S., vol. vii.

cure the disease. Simaruba, tormentilla, and angustura, led to no favourable results; and although the mineral acids were sometimes of service, their exhibition frequently ended in disappointment.

The class of remedies to which, after many trials, I am most partial, are those which combine tonic with slightly astringent properties; and as tonics, bark and iron were certainly in my hands the most effectual. Decoction of bark, with lime-water, in equal proportions, very frequently succeeded. The compound infusion of sarsaparilla, with infusion of bark; the compound powder of chalk and opium, with the saccharine carbonate of iron; quina and opium in pills; the persesquinitrate of iron and tincture of opium; and even the compound iron mixture, were all in their turn advantageous. The mineral acids were sometimes of decided use in checking the salivation.

It is, however, upon a judiciously regulated regimen that the physician must mainly rely in his efforts to combat this truly formidable disease. In order to afford the patient the remotest chance of recovery, his system must be supported from the earliest stages of chronic dysentery. Arrow-root, sago, and such articles of food, well calculated as they are for the temporary relief of intestinal irritation, are but badly adapted for the formation of healthy blood. Eggs and milk are particularly suitable to dysenteric patients. The majority of them not only bear stimulants, but absolutely require them; and thus brandy and milk, egg-flip, and even wine, are occasionally necessary.

Dr. Graves has remarked, that "in chronic dysentery meat is far too much refrained from, and that many cases which obstinately resist the most varied remedies, assiduously employed, get well rapidly after a liberal allowance of meat is given to them"(*a*). To the truth of this assertion I can bear the most ample testimony, having often succeeded in this way after the failure of all other measures.

(*a*) Clinical Lectures, by Neligan, vol. ii. p. 238.

In hospital practice extreme attention to ventilation and cleanliness can scarcely be too highly estimated; *with crowded wards* no remedial measures can be successful.

In addition to other sanitary arrangements, the dysentery wards at the South Dublin Union Workhouse were all in their turn cleared, fumigated with chlorine, scoured, painted, and then furnished with new bedding; the entire process occupying about a week. During the late epidemic this plan was perseveringly carried out, and with the most favourable results; the inconvenience of always having a ward unoccupied being more than counterbalanced by the marked improvement of the sick.

If the patient be young, recovery sometimes occurs under circumstances apparently desperate; if he be at all advanced in life, the chances of a favourable result are greatly diminished. One case has been already mentioned, where paracentesis of the chest appeared to save the life of a girl aged about nineteen years; and in another instance a girl of 20, was reduced to a state of the most extreme emaciation, she was frightfully convulsed for several hours, and remained maniacal for many days, and yet she finally recovered, and left the hospital in perfect health. In the latter, blisters freely applied to the scalp and nape of the neck afforded relief to the brain.

In Dr. Latham's graphic description of the epidemic at the Millbank Penitentiary many details are given, which show a strong similarity between the disease observed by him and that which lately prevailed in Dublin.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Das Kramphafte Asthma der Erwachsenen. Von Dr. J. Bergson. Nordhausen, 1850. 12mo, pp. 149.

On the Spasmodic Asthma of Adults. By Dr. J. Bergson.

This valuable Treatise on Asthma, by Dr. Bergson of Hamburg, obtained for the author the first prize offered by the Royal Society of Sciences at Göttingen. The subject of spasmodic asthma having been excluded from some of the best treatises on diseases of the chest, as belonging to the pathology of the nervous system, rather than to that of the lungs, and several points of diagnosis connected with it having been as yet but imperfectly examined, we are glad of the opportunity afforded of presenting to our readers a view of the most important portion of the contents of the work now before us, which we shall do, as far as possible, in the author's own words.

In conformity with the custom of most German writers of monographs, we have here a copious historical introduction. Not satisfied with beginning "at the beginning," that is to say, with Hippocrates, who is generally taken as the starting point on all medical subjects, we here commence with the Pentateuch. In Exodus, vi. 9 ("And Moses went and spake so unto the children of Israel, but they hearkened not unto Moses, for anguish of spirit and for the cruel bondage"), the Hebrew word translated by the Septuagint ὀλιγοψυχια, and by the Vulgate *angustia spiritus*, is used by the Hebrew writers among the Arabians to express asthma, or, in general, any difficulty of breathing. Passing similar notices on words of a like import in Homer, we enter on the medical authors, viz., Hippocrates,—Aretæus Cappadox, who describes the symptoms of dry and humid bronchitis, constituting two kinds of his ἄσθμα πνευμῶδες,—Celsus, who first indicates the paroxysms and remissions

("dolor in pectore præcordiisque interdum etiam scapulis, isque modo decedit modo revertitur"),—Seneca, who suffered from the disease in his own person, having fits of about an hour's duration ("brevis autem valde, et procellæ similis impetus est, intra horam fere desinit"), but, not having received a medical education, was unable to assign a name to it ("uni morbo quasi assignatus sum, quem, quare Græco nomine appellem nescio, satis enim apte suspirium dici potest"),—we come to Galen, who made sections of the spinal marrow in different places in living animals, in order to demonstrate to his pupils the influence of it on the motions of respiration. These experiments differ from those by Le Gallois, Flourens, Longet, and others, in no respect except in the greater practical skill with which the latter were performed.

Our author next reviews the Arabians and the physicians of the middle ages; but, out of more than one hundred dissertations, *De Dyspnœa*, *Asthmate*, *et Orthopnœa*, nothing can be extracted which had not been derived from Galen or Celsus, and they afford no trace of original observation. At a later period Riolanus, the antagonist of Harvey, mentions idiopathic asthma as a disease under which he had laboured for thirty years. Van Helmont has the merit of having been the first to indicate the existence of a distinct nervous asthma, which he compared with epilepsy, and styled *morbus caducus pulmonum;* but it was reserved for our truly original, but unaccountably neglected English physician, Willis, to lay the foundation of an accurate knowledge of the disease. He clearly distinguished two forms of asthma, viz., pneumonic and convulsive(*a*), and attributed the latter to spasm (*fibrarum motricum spasmis*). Another English physician, Floyer, whose work "On Asthma" was published at London in 1698, although adopting the humoral pathology of his time, yet, having been a sufferer in his own person during more than half his life, has the freshness of an original observer. He named the disease *asthma verum flatulentum*. His treatment was founded on his own experience, and has been confirmed up to the present day. The work was translated into almost all the European languages, and repeatedly republished during the last century, as the standard authority on the subject.

At the time when the nosological systems were framed during the latter half of the last century, the existence of asthma as a distinct disease was overlooked by some, and it became confounded with dyspnœa and angina. There were, however,

(*a*) Opera omnia, Amstelodami, 1682, p. 207.

many who carefully avoided this confusion of terms, and who insisted on periodicity as the leading and characteristic symptom of asthma. Amongst these we cannot pass over Peter Frank, who uses these words:—"Asthma non habetur solum pro respiratione anxia cum sibilo et stertore, sed exposcit, ut simul *periodice* recurrat, libera prebeat intervalla et nullius alterius evidentis morbi sit symptoma."

Although the existence of spasmodic asthma is now universally admitted, yet there are many questions relating to its pathology still unsettled. In 1818 Rostan maintained that the symptoms of asthma, especially in old age, depend exclusively on a failure in the action of the heart and great vessels. Bouilland, in 1828, maintained that no case of asthma could occur without organic change in the organs of respiration and circulation. Laennec, and after him Rokitansky, although admitting the existence of spasmodic asthma, yet consider that dry bronchitis and emphysema are the most frequent causes of it. Romberg (Berlin, 1841) considers it as a spasm of the bronchial tubes, while also admitting it as a symptom of lesion of the par vagum; and Canstatt (Erlangen, 1843), while viewing it as a spasm of the respiratory organs, still considers it merely as a symptom of some other disease.

The symptoms preceding an asthmatic seizure are thus enumerated. On the day preceding the night of the attack there is frequently drowsiness, or tendency to yawn, and an indisposition for society, a dull frontal headach, sense of abdominal distention, and a feeling of dryness in the nose and larynx, which, according to Joseph Frank, in the case of a Russian prince, one of his patients, was always followed by a fit. In the case of a young man who suffered from the disease during many years, and in whom the fits always came on during his sleep at night, they were invariably ushered in by a convulsive twitch in the right foot, which commonly awoke him just before the seizure. A sudden development of flatulence is also frequent; and Floyer had remarked a fulness of the stomach, as the first threatening of a fit. Towards evening there is a general uneasiness, a sense of heat over the body, and an increased flow of saliva. The patient goes to bed, but finds the warmth uncomfortable. Cold drinks are sought for, and at last the feeling of weariness terminates in sleep.

The symptoms of the asthmatic paroxysm are the following. After the patient has slept several hours, generally up to 1 or 3 o'clock, A. M. he suddenly calls out, from the urgency of a sense of suffocation and constriction of the chest, which he is unable to expand. He gets up, endeavours to open the win-

dow, and supports himself with his hands and arms against a table or chair, so as to procure fixed points for the muscles required in laborious inspiration. The sound of the breathing can often be heard at a considerable distance, and this is especially the case with the inspirations, which are longer and more difficult than the expirations, so that several of the former may be heard for every one of the latter. The movements of the thorax are quite irregular; it is drawn more outwards, and then again pressed downwards, so that its parietes continue stiff and fixed, as if incapable of extension. All the muscles belonging to respiration are in a state of spasmodic contraction, especially the anterior muscles of the neck. The shoulder-blades are elevated like wings, and, from the contraction of the mastoid muscles, deep hollows are formed above and below the clavicles. There is also a hollow at the pit of the stomach, where it is connected with the insertion of the diaphragm.

In this state the patient can hardly perform any of the actions connected with respiration; even speaking becomes at times impossible, and when he coughs he is obliged to do so in the slightest manner.

The physical signs during the fit are, 1st, more audible mucous sounds in the larynx. 2nd, sibilant and sonorous ronchi, often changing place, accompanying both inspiration and expiration, at first dry, afterwards becoming moist, and terminating with a copious expectoration. These sounds are more audible in expiration than inspiration. 3rd. A diminution or entire suppression of the respiratory murmur. This, however, is attended with the peculiarity that the respiratory murmur may be brought back for a time by resorting to the experiment described by Laennec, Williams, Chapman, and others, which consists in the patient holding his breath as long as he can, and then gradually suffering the air to re-enter, whereupon, not only the natural degree of respiratory murmur, but sometimes even puerile respiration, is perceived. When this experiment is difficult, on account of the violence of the fit, it may be rendered more easy by allowing the patient to read or to count aloud, instead of holding in his breath, and on ceasing then the return of respiratory murmur ensues. According to Williams, however, in adopting this latter mode, after the first or second expiration which must take place in reading or speaking, spasmodic action comes on with renewed violence, and the respiration becomes as dull as before. The value of the experiment is, according to Chapman(*a*), so great,

(*a*) Lectures on the Diseases of the Thoracic Viscera, Philadelphia, 1844.

that he ranks it as the only diagnostic sign of pure asthma. 4th. The signs afforded by percussion are less distinct than those from auscultation. Some, as Geddings, Williams, &c., find the sound duller than in health, while it is clearer according to Andral, Romberg, and Lefevre. This discrepancy most probably has arisen from different degrees of emaciation in the subjects examined. According to our author's observations the sound is really clearer.

Passing over the sections on the idiopathic or sympathetic nature of asthma, and on the exciting causes and the prognosis (from page 32 to 69), we come to the treatment, in which we find no new course recommended. He enumerates, in the first place, the opiate treatment, then Hoffman's combination of opium with a solution of camphor and sulphuric ether; Ipecacuanha, which Heim gave with aloes in asthma, and also of late commended by Romberg and others, as acting specifically on the par vagum; smoking the lobelia inflata, as also smoking belladonna, hyoscyamus, and stramonium, as well as using them internally. Jackson preferred chloric and sulphuric ether, both internally and in the form of vapour; Rayer(*a*), painting the interior of the throat with liquid ammonia. He quotes several instances to illustrate the influence of various agencies, e. g.(*b*) one in which the paroxysms were, contrary to what is usually the case, much more violent whenever the patient was in wide, expansive situations, as at the surface of the sea. Indeed visible objects appear to have extraordinary influence. Thus Laennec relates the case of a count, eighty-two years of age, in whom the darkness of night caused invariably an accession of asthma, so that it came on whenever his night lamp happened to be extinguished. Lefevre observed in his own case that the fits coming on in the dark were decidedly the severest, and a similar observation was made by another physician, Kohlschutter, on his own case.

Having detailed a number of experiments from various sources, as the result of which our author considers himself justified in the conclusion that the asthmatic fit consists in a spasmodic contraction of the bronchial and pulmonary air-cells, caused by the action of the par vagum on the muscular fibres in these structures, so that he thinks it may properly be termed *spasmus bronchialis*, he divides it into two kinds: the first proceeding from the brain (cerebral asthma), and the second from the spinal marrow (spinal asthma).

(*a*) Annales de Therapeutique, 1845.
(*b*) Gedding, Baltimore Journal, 1834.

In cerebral asthma the seat of the disease is in the brain. Jolly(*a*) found in an individual who died with the well-recognised symptoms of an asthmatic fit, a degeneration of the substance of the brain at the base, towards the origin of the eighth pair of cerebral nerves, and unaccompanied by any diseased appearance in any other organ. Georget(*b*) found changes of structure and of colour so often in the brain of asthmatic subjects, that he considered this organ as the seat of the disease. A case has been related by Simpson(*c*) of a man who from drunkenness became comatose. His breathing was laborious, accompanied by a loud sound, and he appeared in imminent danger of suffocation. Tracheotomy was performed, under the conviction that the respiration was impeded in consequence of oppression of the par vagum and recurrent nerve, and that the want of arterialized blood re-acted on the brain. The consequence was immediate, and the restoration of the patient almost instantaneously effected. The disease of horses known by the term *roaring*, which is, in one of its forms, properly asthma, was, in a case related by Liegard (1836), when the animal was in the most violent fit of it, so that he could be heard at a distance of thirty feet, completely and at once removed by bleeding performed under the opinion of its being connected with oppression of the brain, which the subsequent history of the case confirmed.

In spinal asthma the influence of the brain on the function of respiration remains undisturbed, but that of the spinal system is preternaturally excited, producing contractions in the bronchial tubes.

Spinal asthma is of two sorts, viz., centric and excentric.

Centric spinal asthma has for its seat that portion of the spinal marrow which, according to the experiments stated at large by our author in the preceding section of the work, is the source of the nerves of respiration. Any irritation applied to it may produce asthma in its most distinct form; such as wounds, acute or chronic inflammation, effusions, pressure from tumours, and other diseases, all of which have been found connected with asthma. For such the reader is referred to Ollivier, Bright, and Charles Bell's cases. To this same division is properly to be referred that large class of cases of spinal neuralgia, where asthma is produced in consequence of congestion of blood affecting the spinal marrow. The characteristic symptom of this is that peculiar tenderness perceived at certain

(*a*) Bib. Med. 1822. (*b*) Physiol. du Syst. Nerv.
(*c*) Med. Chir. Trans., vol. xx.

parts of the back which often exists in cases of spasmodic asthma, but is unnoticed and disregarded by the patient. As an illustration we have two cases referred to, one of a girl twenty years of age, who suffered from pain in the region of the stomach and colon. In her case asthmatic difficulty of breathing resulted whenever the upper dorsal vertebræ were pressed. The pain is most frequently felt about the seventh and eighth vertebræ. In the other case, a man fifty years of age, pressure on these vertebræ caused panting and a suffocative cough. The case of a teacher is described by Enz(*a*), in whom, pressure being applied on the inferior cervical or superior dorsal vertebræ, he felt difficulty of respiration; but when the pressure was applied to the middle dorsal vertebræ, then he had spasmodic cough with great constriction of breathing. Lefevre, in the description of his own asthma, which lasted a year, states that he often experienced a periodically returning pain in the back, at the part where the trapezius is inserted, and also in the spinous process of the cervical and dorsal vertebræ; and before the discoveries of late years, Jos. Frank(*b*), in noticing the pain of the scapula in asthma, said:—"Si agitationem musculorum thoracis sub asthmatis insultu consideramus suspicio columnam vertebralem ex qua illi musculi nervos accipiunt interdum non plane immunem esse."

Excentric Spinal Asthma.—In this the nervous centre is free from disease, and the irritation is conveyed from without; but as this may be in three different ways, viz., in the reflex nerves or in the ganglia, or, which is the most unfrequent of all, in the motor or centrifugal nerve, we divide excentric asthma into reflex, ganglionic, and motor asthma.

Reflex Asthma may be produced from disturbance of the digestive system, as from dyspepsia, the abuse of spirituous liquors, or intestinal worms, &c. Thus Floyer relates that whenever he took punch, he suffered from difficulty of breathing. Lefevre experienced the same from any kind of spirituous liquor; and there are many instances in Jos. Frank's work and elsewhere, of asthmatic fits being produced by the presence of worms. Turning to comparative pathology, Regnault(*c*) relates that he and Delafond saw the *lathyrus cicera*, which is much cultivated in the south of France, produce the most violent *roaring* in horses, who, during the intervals, were completely free from the complaint. It is to be observed that Orfila ascribes poisonous qualities to this plant, and says that,

(*a*) Rust's Mag. 1834. (*b*) Prax. Præc. Lips, 1823. (*c*) Le Veterin, t. 8.

when mixed up with wheaten flour, it may cause partial paralysis of the lower extremities.

A second cause of reflex asthma is irritation of the mucous surface of the bronchial tubes. Thus asthmatic fits are often excited by breathing dust, the pollen of grass in flower (hay asthma), acrid gases, vapours of lead, &c. Several cases are recorded of the same from powdered ipecacuanha; also from the odour of sun-flower or hyacinths. Lefevre mentions how he suffered from the smell of a heap of apples, from the dust whenever carpets or draperies were shaken, and especially how he always was attacked with a fit whenever, during a six months' voyage, he was exposed to the vapours of chlorine. To this head also belong the difficulty of breathing produced by the fumes of lead, which has been termed lead asthma. Many cases of *roaring* in horses employed in lead works have been recorded. Many similar cases in the human subject, both from inhalation and from cutaneous absorption, are given in Tanquerel's work (Paris, 1830). Trousseau relates the case of a painter in the hospital at Tours, who had often suffered from lead colic, but who was attacked with the most violent asthmatic difficulty of breathing, under which he died, and on examination the lungs were found perfectly healthy. There is also an instructive case of periodical spasms of the thorax in Laner (1846).

A third cause is irritation of some portion of the par vagum itself. When, by compression from tumours, &c., the nerve of one side is atrophied or injured, this becomes paralysed, and the nerve of the opposite side is thrown into a state of preternatural activity, and thus the phenomena of asthma ensue.

Our author will not admit the existence of asthma as a paralytic affection, as he considers it to be essentially a disease of spasm. In the London Medical Gazette for 1843, there is a case of aneurism of the arch of the aorta, in which, at the commencement, there was a weakness of the voice which afterwards was succeeded by orthopnœa. At last the voice changed into a kind of squeak, which Jackson considered to be the effect of narrowing of the glottis and distention of the chordæ vocales from over-action of the crico-thyroid and sterno-hyoid muscles. On examination, after death, the left recurrent was found to have been carried round the entire of the aneurismal sac, which extended towards the axilla; it was hard, red, and involved in the structure round the cavity. The part of the nerve behind the sac was flattened, its fibres separated, and completely disorganized.

Huguier(*a*) relates a case of aneurism of the aorta which had caused atrophy of the left recurrent. The patient from time to time laboured under accession of urgent suffocation, resembling sometimes that of croup, and at another that of œdema of the glottis. To these cases may be added that described by Lawrence(*b*). A similar compression of the vagum or of its branches was considered by Burns(*c*), as the cause why small tumefactions at the neck often cause greater disturbances of respiration than could be anticipated from their size. This is explained by Romberg by the greater rapidity in such cases being attended with greater irritation.

Rush describes, under the term asthma, the case of a man twenty-two years of age, who laboured under fits of threatening suffocation, with a loud noise in respiration, and in whom there was a tumour the size of a walnut at the left side of the trachea, which pressed on the part of the vagum lying between it and the œsophagus. Montault(*d*) had under his observation a woman affected with asthmatic fits, accompanied by croupy cough. On examination after death, he found both recurrents compressed by a large deposit of encephaloid structure.

A fourth cause is the influence of mental emotions, as anger, terror, &c. A curious case is related by Stiebel, in which a hypochondriac appears to have produced the disease merely by imagining that he was to have it.

Ganglionic Asthma.—Here the diagnosis is difficult, and has consequently been for the most part overlooked. It depends on the disorder of sensation being antecedent to that of motion, which may easily escape detection, unless both patient and physician are endowed with a spirit of observation. Consequently we are mostly obliged to proceed by negatives in establishing the diagnosis between it and the other kinds of asthma. The following case, described by Niese (1846), affords a specimen. A seafaring man of thin habit, but who had previously enjoyed good health, for some time began to experience every night a violent pain at the pit of the stomach, extending up to the breast. He soon was unable to lie down, and was obliged to sit upright with the fear of losing his breath, and of impending suffocation on making any motion. After some duration of difficult breathing, a violent cough supervened. These symptoms lasted the entire of the following night, and thus deprived him of his sleep till morning. The

(*a*) Archives, 1834. (*b*) Med. Chir. Trans., vol. vi. p. 227.
(*c*) Surgical Anatomy of the Head and Neck, p. 47.
(*d*) Jour. Hebd., t. ii.

disease, however, developed itself in a periodic manner, with complete intervals of freedom from complaint. Having undertaken the laborious employment of a wood-cutter, he increased his muscular vigour; but his fits of asthma came on both by day as well as night, leaving, however, free intervals during which he could even take long walks without the slightest inconvenience. The appetite never was affected, but the bowels were torpid. The examination of the chest detected no disease. There was no irregularity or tenderness of the spine, and thus he concluded that there was no spinal irritation.

These negative facts led Niese to the conclusion, that he had here to deal with a nervous affection, which, although bearing much resemblance to angina pectoris, yet in several points differed from it; and inasmuch as angina depends on the cardiac ganglia, so may it, as well as the present case, be justly enumerated as one of ganglionic asthma. As impartial reviewers, we may here take this opportunity of remarking that we should have referred most of the symptoms in the above case to the presence of narcotic gases in the colon, connected with the torpidity of the bowels, and should have directed our treatment in that direction. We are informed, however, by our author, that Niese was induced by the opinion he had formed, to resort to the employment of belladonna, opium, and valerian, which were attended with good effects.

Motor Asthma.—To this class belong all those cases in which either the muscles or the bones concerned in the motions of respiration are incapable of obeying the impulse conveyed to them from the nervous centre. Rickets, Pott's curvature, and other diseases of the bones of the thorax, are often attended with asthma. Stromeyer first (1836) directed attention to the peculiar kind of paralysis of certain of the muscles of the thorax, which deprives them of the power of assisting in respiration, but leaves them in full possession of their power of acting as voluntary muscles. The necessary consequence of this is, that the symmetry of the chest is destroyed. When in young dogs a small portion of the upper part of the nervus thoracicus posterior was cut off, the corresponding part of the chest was after three days found to have sunk, and this sinking went on increasing, till at the end of fourteen days there was a difference of from five to six lines in the convexity of the two sides. In the human subject the serratus anticus and the trapezius sometimes become paralysed, especially in childhood and in young girls, producing that deformity so well known by the name *chicken-breast.* It may also come on in adult age, and affect both

sides alike. It may then make its appearance under the form of spasmodic asthma, with evident paroxysms. Such cases are described in the works of Shaw and Charles Bell. They exhibit periodic asthma arising from respiratory paralysis of the muscles of the thorax, so that the functions of the latter are in a measure vicariously performed by the abdominal muscles. When however, these, as in sleep, are not able to fulfill that office, there will result a danger of the asthmatic paroxysm in its utmost intensity, and of suffocation. The occurrence of paroxysms of this kind in hysterical cases is the subject of the following important observation by Romberg:—"Quod si medici qui in morbis asthmaticis modo cor et pulmones explorare consueverunt, ad thoracis motus majorem attentionem deferant, sæpenumero ad dignoscendam mali naturam plus lucis iis suppeditabitur."

The most interesting part of our author's work is that in which he presents us with tabular views of the diagnosis between spasmodic asthma and the other affections which are accompanied by asthmatic paroxysms.

I.—BETWEEN IT AND ANGINA PECTORIS.

A. *Symptoms in Common.*—The accessions coming on suddenly, with distress of breathing. The countenance, during the accessions, equally altered and anxious, the eyes prominent, and the cheeks colourless; the pulse weak and small.

B. *Distinguishing Symptoms.*

IN ANGINA PECTORIS.	IN ASTHMA.
1. The distress overpowering and accompanied by a feeling as of approaching death. The anxiety indescribable, and the seat of it under the sternum at the pit of the stomach.	1. The distress not so intense and not limited to any one point but extending throughout the whole chest.
2. The distress, however violent, yet not interfering with respiration.	2. The breathing confined, and the constriction producing a sense of approaching suffocation.
3. The paroxysms usually occurring in the day time, and coming on while the patient is walking, standing, or speaking.	3. The paroxysms almost always occurring at night, when the patient is in bed.
4. The respiratory motions never violent, and not visibly disturbed, except inasmuch as it may arise from the general state of distress. No peculiar dyspnœa, and the patient can often,	4. The respiratory motions irregular and laborious; the thorax impelled up and down, but without having its capacity expanded. Hollows formed above and beneath the clavicles. The

by a strong effort, take a deep inspiration, even while the paroxysm is most severe.	patient, even with the strongest efforts, cannot take a deep inspiration. Respiration seems at times to become almost impossible.
5. The painful sensation which is at first confined to the cardiac region extending in all directions, and especially lodging in the left arm.	5. No such phenomenon occurring.
6. The heart's action but little changed. No alteration appreciable to auscultation or percussion.	6. The action of the heart unchanged, but there is a sibilant ronchus, with failure of the respiratory murmur.
7. The accession terminating with eructations or yawning, but with no vomiting.	7. The accession terminating with copious bronchial secretion.

II.—Between it and Spasm of the Thorax (i. e. of the External Muscles concerned in Respiration).

A. *Symptoms in Common* between asthma, which is a spasm of the bronchial tubes, and spasm of the external muscles, are, that in both respiration is affected suddenly and in paroxysms; the chest and shoulders are convulsively raised and depressed; and the difficulty of breathing approaches suffocation. The patients in both are unable to speak, but, once the paroxysm has terminated, are then completely freed from all pain or obstruction in breathing.

B. *Distinguishing Symptoms.*

In Spasms of the Thorax.	In Asthma.
1. Respiratory murmur perfectly natural.	1. Respiratory murmur almost extinct.
2. Dyspnœa present only in proportion to the degree in which inspiration is impeded by the spasmodic action of the external muscles.	2. Dyspnœa to such a degree that both inspiration and expiration become equally constrained, with a feeling of internal oppression.
3. The paroxysms mostly during the day.	3. The paroxysms at night.
4. The spasm never occupying more than one-half of the chest.	4. Asthmatic oppression over the whole chest.
5. The spasm ceasing without any critical evacuation.	5. The paroxysm terminating with an abundant expectoration.

III.—Between it and Paralysis of the Thorax.

A. *Symptoms in Common.*—Dyspnœa coming on in a paroxysm at night during the first sleep. In both cases the patient complains of inability to expand the chest in respiration.

B. *Distinguishing Symptoms.*

IN PARALYSIS OF THE THORAX.	IN ASTHMA.
1. Some degree of deformity in the breast or back from defect in the action of the nerves supplying these parts. Hence arise curvatures, inequality in the height of the shoulders, or chicken-breast.	1. No necessary deformity, except that the chest appears distended like a barrel.
2. Laborious respiration can be produced merely by pressing on the abdomen, which renders evident the deficient action of the muscles of the chest.	2. During the intervals pressure on the abdomen produces no approach to asthma.
3. The most frequent subjects of the disease are delicate young persons before puberty, and it often arises from hooping cough.	3. Asthma generally attacks men of strong constitution, and without any previous disease.

IV.—BETWEEN IT AND INTERCOSTAL NEURALGIA.

IN INTERCOSTAL NEURALGIA.	IN ASTHMA.
1. The pain is in the space between the ribs, and follows the course of the intercostal nerves from their origin at the vertebræ to their termination at the sternum.	1. The painful sensation diffused indefinitely over the whole chest, and not confined to the course of any nerve.
2. Pressure at the origin of the affected nerve always produces pain.	2. Pressure on the spine, unless spinal irritation be present, is unaccompanied by any painful sensation.
3. The disease occurs especially in females, and principally in women of sensitive habit.	3. It mostly attacks men of robust constitution.
4. No morbid phenomena detected by auscultation or percussion.	4. During the accession there is either a mucous or sibilant ronchus.

V.—BETWEEN IT AND HYPERÆSTHESIA OF THE PULMONARY PLEXUS.

Laennec distinguished this kind of asthma, in which, notwithstanding a sensation of inability of adequately breathing, which is felt in the highest degree, yet the expansion of the chest goes on well, and the respiratory murmur is not only undiminished, but rather assumes the character of puerile respiration. This he designated as asthma with respiration.

Along with Canstatt and Romberg (Berlin, 1846), our author is inclined to consider this asthma as a hyperæsthesia of the lungs, and as having its seat in the sensitive portion of the par vagum, in the same way as he considers spasmodic asthma to have its seat in the motor portion of the same nerve.

A. *Symptoms in Common.*—Accessions coming on suddenly and characterized by violent dyspnœa, incapacitating the patient from doing anything as long as it lasts. In both there are often catarrhal symptoms.

B. *Distinguishing Symptoms.*

In Hyperæsthesia of the Pulmonary Plexus.	In Asthma.
1. The accessions occurring mostly in the day, and aggravated by any movement of the body.	1. The accesssions coming on at night, and relieved, in some measure, by pressing down on the arms.
2. Respiration goes on well, and on auscultation is discovered to be puerile.	2. The respiratory murmur is oppressed.
3. The expression of the countenance unaltered.	3. During the accession the countenance is contracted and anxious.
4. Expectoration during the accession is easy, but yet not attended with any relief.	4. Expectoration not occurring till towards the termination of the accession, and always attended with relief.

VI.—Between it and Respiratory Paralysis of the Par Vagum.

Respiratory paralysis was first pointed out by Romberg(*a*), and he made two divisions of it, viz., the first, paralysis of the vagum, which influences the respiratory muscles of the larynx; and the second, paralysis of the spinal nerves supplying the respiratory muscles of the trunk. The last is the paralysis of the thorax of No. 3. The disease now before us is occasioned generally by pressure of indurated glands, or other tumours on the par vagum or some of its branches, and presents symptoms which may readily be mistaken for those of asthma.

A. *Symptoms in Common.*—Accessions coming on suddenly, and having intervals perfectly free from oppression. In the paroxysms the distress often amounts to approaching suffocation, with the formation of various bronchial sounds, while the respiratory murmur is enfeebled.

(*a*) De Paralysi Respiratoria, Berol. 1845.

B. *Distinguishing Symptoms.*

In Respiratory Paralysis of the Par Vagum.	In Asthma.
1. The attacks come on after any considerable motion of the body, and cease as soon as the patient lies down again.	1. The paroxysms coming on during sleep and when lying down, and are relieved by sitting up.
2. The voice in the course of the disease assumes a whispering or hoarse sound, or is reduced to complete aphonia.	2. No changes of the voice or of speech.
3. The disease mostly attacks scrofulous children, arising from pressure of tumours in the neck.	3. Occurring rarely except in adult age, and without any traces of lymphatic swellings in the throat or neck.

VII.—Between it and Nightmare (Incubus).

A. Floyer had already recognised a resemblance between asthma and nightmare, inasmuch as the latter comes on in sleep, and produces laborious respiration with moans, the chest being compressed as by a superincumbent weight, and the patient in all the horrors of approaching suffocation ; and Romberg, in his late work, has placed it among his hypo-neuroses.

B. *Distinguishing Symptoms.*

In Nightmare.	
1. As soon as the patient is completely awakened, all the feelings of approaching suffocation are at an end.	1. The asthmatic fit at once wakens the patient out of sleep, who, though completely roused up, yet has to seek the upright posture in order to breathe more freely.
2. While in the fit, notwithstanding the greatest difficulty of breathing, yet the patient is unable to move his limbs or to call for help.	2. The patient gets up, and is able to assume the easiest position.
3. Auscultation detects no abnormal sound.	3. The respiratory murmur is oppressed.

VIII.—Between it and Pneumotyposis.

A. *Symptoms in Common.*—Pneumonia, bronchitis, and pleurisy, when occurring in an intermittent form, are included by our author under the one name, pneumotyposis, and in this form they agree in resembling asthma, by reason of the suddenness of their accessions, and from their recurring in paroxysms.

B. *Distinguishing Symptoms.*

In Pneumotyposis.	In Asthma.
1. The paroxysm commencing with a rigor, and the oppression in the chest not decidedly manifest till the hot stage.	1. The paroxysm commencing without any change of temperature, and the severest difficulty of breathing coming on from the beginning.
2. The paroxysm occurring at regular periods, and thus assuming the character of quotidian, tertian, &c.	2. A much inferior tendency to regularity in the return of the paroxysms.
3. Auscultation and percussion reveal the existence of pneumonia, bronchitis, or pleuritis, which still continues in some degree during the intervals.	3. The symptoms to be detected by auscultation, and especially the mucous sounds coming on chiefly towards the end of the paroxysm.

IX.—Between it and submucous Laryngitis or Œdema of the Glottis.

A. *Symptoms in Common.*—The patient is seized with a fit of suffocation, which soon attains its highest degree. The countenance becomes congested, the eyes starting from the orbits, and at the same time the extremities become cold: in short, presenting the appearance of asthma in its severest form.

B. *Distinguishing Symptoms.*

In Œdema of the Glottis.	In Asthma.
1. Inspiration produces no painful sensation in the chest, but only in the larynx, to which the patient refers all his difficulty of breathing.	1. The impediment to inspiration is proved to be not so much in the larynx as in the chest.
2. Every effort to draw in the breath is accompanied by a wheezing sound.	2. Inspiration takes place without any peculiar sound in the larynx.
3. Expiration goes on uninterruptedly.	3. Expiration and inspiration are equally difficult.
4. The patient thinks there is some large foreign body in his larynx, which he would gladly get rid of.	4. No sensation as of a foreign body in the larynx.
5. The suffocative attack lasts only from two to four minutes.	5. The asthmatic attack lasts several hours.
6. It returns in from five to ten minutes.	6. It returns at the utmost in about every twenty-four hours.
7. The cough is dry and of a croupy sound.	7. The cough moist and with the usual sound.

Although some of the propositions above quoted do not exactly agree with our experience, and although there are some to which considerable additions ought to be made, yet the work appears to us of great and remarkable value, not so much from the facts actually detailed, as from the peculiar path of inquiry which it opens. It must be acknowledged that the mechanical action of respiration is so entirely under the dominion of the muscular part of the apparatus, and this again so much under the dominion of the nerves, that the function is but imperfectly considered when examined exclusively by means of percussion and auscultation. On these grounds we cannot conclude without bestowing our very hearty commendation on our author's performance; and we indulge a hope that even this short epitome of it may communicate an impulse on the subject, and cause the nervous department of thoracic pathology to receive that share of attention which it certainly deserves.

On the Management of Infancy; with Remarks on the Influence of Diet and Regimen. By Charles Hogg, M. R. C. S., L. A. C., &c. London: Churchill. 1849. 12mo. pp. 132.

"Zeal for the utmost melioration of human ills is not a sufficient justification for stepping before the public with medical remedies; when, however, to a consciousness of sincere motives are added watchful observation over a period of twenty years, and a constant practical experience, perhaps unusual both in kind and extent, especially in cutaneous diseases and scrofula, it may not be deemed arrogant to report the results of treatment, the benefits of which have been incontestably proved."

Such are the chief reasons which prompted Mr. Hogg to this, his first attempt at medical authorship. Had he contented himself with simply recording the results of his "unusual" experience in cutaneous diseases and scrofula, he would, we think, have acted more judiciously. Instead of this he has produced a medico-popular work, which treats very imperfectly on a number of subjects having little or no connexion with each other, and some of them still less with the title-page, except the accidental one of being bound in the same cover. In common with nearly all works of this class, intended for the profession and the public, it defeats its own object, and is ill adapted to either.

The physician will find in it little that he did not know

before, and the "general reader" will necessarily meet with much that he cannot comprehend. Discarding these considerations, however, we shall glance at the few points really deserving of attention in the book, and be ready to bestow a full share of praise where this seems to be deserved.

Twelve pages of introduction, containing some general remarks on digestion and diet, constitute Chapter I. The author very properly insists on the vast importance of a strict regard to dietetic rules in the management of children and invalids. We cannot perceive that he advances anything new, unless indeed the following, which appears the more extraordinary, coming as it does immediately after a quotation from the work of Liebig:

"We do not think it is of such weighty importance, in reference to the nourishment of the body, whether the food is nitrogenous or not, seeing that the ultimate effect of all aliment is the same. There is but little difference between the flesh of carnivorous and herbivorous animals. . . . . It is in the experience of most persons, that the degree of feverish excitement is greater after a full meal of animal food than one of a purely vegetable character. Although we are told that animal food is more analogous in composition to the recipient, yet we assert that in practice there is more expenditure of vital power necessary for its digestion and assimilation."

We are at some loss to know what the author intended to convey in this latter sentence. He cannot possibly mean by it that animal food is more difficult or slower of digestion than vegetable; for though, unquestionably, the former is more stimulating, still the highest authorities agree in considering it to be easier of assimilation than food derived from the vegetable kingdom. The use of butter by persons suffering under scrofulous complaints is most strongly condemned, but, as appears to us, on very insufficient grounds. Where the digestive powers are impaired it should certainly be prohibited, but otherwise there can be no reasonable objection to its employment as an article of diet.

Chapters II. and III. (occupying twenty-eight pages) are taken up with the hygienics of infancy and childhood. His observations, so far as they go, are very good, but the author makes no addition to our knowledge on this subject, nor does he give anything like so much information as is to be found in the works of Drs. Combe, Underwood, Conquest, Dewees, Churchill, and several others. Many well-chosen quotations from the writings of some of these authors occur, and contribute not a little to the value of this portion of the book. Mr. Hogg seems to be imbued with a very strong prejudice against

the use of animal food for children. If his remarks be intended to apply to solid animal food only, we should not perhaps dispute their soundness; but if animal broths, such as beef-tea, chicken or veal broth, &c., be included in the interdict, we must beg leave to differ with him, as we feel convinced that very few children, after they are twelve months old, will be injured, and many will be benefited, by the occasional and moderate use of animal food in this form.

The fourth chapter gives a brief notice of the different kinds of baths, and the rules to be observed in their employment. He extols much the vapour bath for its great efficacy and extensive utility, and feels "perfectly assured that the prejudices of medical men, with regard to the use of the vapour bath, arise solely from ignorance of its effects." Though of opinion that this observation was uncalled for, still we are free to confess our belief, that the vapour bath, as a therapeutic agent is one of great power, and not by any means so often employed as it might be, even with all its attendant inconveniences. From the consideration of these cutaneous applications, as we may term them, our author passes to "cutaneous eruptions," and under this head makes some highly practical remarks upon herpes, porrigo scutulata, icthyosis, lepra, and psoriasis. In the treatment of the two first of these, he recommends highly the use of a liniment consisting of an ounce of citrine ointment, two ounces of cocoa-nut oil, and three ounces of lime water; it should form a liquid of about the consistence of cream, but of darker colour; and to one ounce of this he adds from twenty to thirty drops of hydrocyanic acid (Scheele's strength). This would appear a good combination, and better calculated to bring the elements upon which its efficacy depends into close contact with the diseased part, than when applied in the usual form of ointment. For the cure of both these eruptions, he deems it very essential that the patient be restricted to a milk and farinaceous diet. This is a point which has already been strongly insisted on by Dr. Neligan(*a*). His description of porrigo scutulata is far from accurate. It would indeed apply with more correctness to impetigo capitis, as the essentially characteristic appearances of the former disease are not stated, while he describes it as being *pustular*. The unusual success, too, which seems to have attended the author's treatment, would almost suggest a doubt as to whether all the cases alluded to were really examples of favus. Besides regulating the diet and improving the general health, he occa-

(*a*) See the Number of this Journal for August, 1848, p. 29.

sionally orders the vapour bath; and the topical treatment consists in removing the scabs by frequent poulticing, and then applying the liniment already mentioned, alternately with an ointment having calomel for its active ingredient. This would appear a simple enough mode of treatment, and not so much differing from what has been over and over again tried ineffectually in favus, as to explain its extraordinary success in his hands.

The next chapter is upon "scrofula, or king's evil." In his treatment of the various forms of this disease there are three points which hold an exalted place in his estimation, viz., a farinaceous diet, the casual employment of the vapour bath, and the internal administration of decoction of polygala Senega. This last is, we believe, a new remedy for scrofula; and if it proves deserving of the high encomiums bestowed on it by Mr. Hogg, he will be entitled to the thanks of the profession for calling their attention to its anti-strumous properties. He does not recommend it as a specific, but says that "in his hands it has been more successful than any other remedy." It may be well just to state his mode of preparing and using this medicine.

"One ounce ought to be slowly boiled in a quart of water for three or four hours(*a*). The usual dose for adults is, from one to two fluid ounces, three times a day. We have tried it in all forms for many years, but we prefer the decoction to any other. It appears to have an almost direct influence on the glandular system, determining to the skin, and exciting the peristaltic action of the bowels; it is a powerful expectorant, and possesses diuretic properties."

Several cases are recorded by Mr. Hogg, in which this remedy was employed (though not to the exclusion of others), and in all of them was followed by satisfactory results. He has had a very limited experience of the use of cod-liver oil, "having only prescribed it in two cases of scrofula, and one of phthisis, in all of which the most marked results have followed."

Chapter VII., on "hepatic, or liver disorders," commences with some common-place physiological observations, respecting

(*a*) The investigations of pharmaceutic chemists have shown that, by prolonged boiling, the active principle of senega is formed into an insoluble compound with some of the constituents of the root; and, consequently, in the last editions of the Dublin and Edinburgh Pharmacopœias an infusion is substituted for the decoction. We would, therefore, recommend any of our readers who may be induced to try Mr. Hogg's plan of treating scrofula, not to adopt his method of prescribing it.

the liver and biliary secretion. These he disposes of in a sort of collective manner, without any attempt at classification, or pathological distinction; his sole object being to bring under notice the use of the extract of taraxacum. This medicine was at one time much esteemed in the treatment of liver diseases, and was greatly cried up by Dr. Pemberton; indeed it was mainly his extravagant praises that gained for it its high character in these complaints. Latterly it seems to be rather falling into disrepute, in consequence, we suspect, of the impurity of the article, as generally found in the shops, or else owing to some defect in the quantity administered or mode of administration. Though Mr. Hogg tells us little that is novel respecting the therapeutic action and uses of this medicine, yet, he makes his readers acquainted with a class of pharmacopolists, whose name and occupation is probably new to many of them, and whose preparation of the herb it is that he employs with such success. These are a religious sect, denominated "the Shakers of New Lebanon," who devote their time principally to the cultivation and gathering of medicinal plants, and the preparing of extracts from the same. He states that the extract of taraxacum prepared by them contains at least double the quantity of the active principle, and is much more powerful in its operation than any he has been able to obtain in England. He agrees with Dr. Pemberton in thinking that this remedy is peculiarly advantageous in chronic hepatitis. He has also found it most beneficial in numerous cases of jaundice. Mr. Hogg concludes his work with an appendix containing some brief remarks on the dietetic properties of the various articles of food and drink in ordinary use.

On Animal Chemistry in its Application to Stomach and Renal Diseases. By H. BENCE JONES, M. D., &c., Physician to St. George's Hospital. London: Churchill. 1850. 8vo. pp. 139.

THE subject of organic chemistry, the legitimate basis of the practice of rational medicine, has of late years largely occupied the attention of many celebrated continental chemists, as well as that of some of the most talented amongst our own countrymen. Being a very difficult and laborious study, and one which, though fraught with many prospective advantages to the profession, offers to those engaged in it comparatively little present reward, as a compensation for the great expenditure of time and trouble necessary for its successful pursuit, every advance in this direction, made by competent observers, should

be favourably received, as tending to render this branch of science more productive of benefit to the practical physician.

Amongst those who have effected most for the advancement of animal chemistry, the name of Liebig indubitably stands pre-eminent, and to his accurate observations and brilliant discoveries must justly be ascribed the rapid strides which have been made in the acquisition of correct knowledge respecting some of the most important and interesting functions of the animal economy. We cannot attempt to trace the progress of further improvements, or to appropriate the exact share of merit everywhere due; but so far as regards the subject which more immediately occupies our attention in the work now under consideration, we can safely say, that amongst British practitioners who have distinguished themselves by valuable contributions in this department of medicine, the name of the late Dr. Prout deservedly ranks foremost. He first directed attention to the intimate connexion existing between derangements of the stomach and alterations in the character of the urine; and in each succeeding edition of his valuable treatise, keeping pace with the advance of knowledge upon these subjects, and availing himself of the light shed upon them by the labours of others, he laid the foundation for a correct treatment of these affections by a proper location of the diseased action, teaching the profession to seek it in the digestive organs rather than in the kidneys exclusively, as had been heretofore uniformly done. It is chiefly to his cultivation of organic chemistry that we owe the clear views now possessed of the relation of the urinary secretion to the character of the food, and also the knowledge we have of the true functions of the kidneys. Every unhealthy condition of the urine is not now attributed to a diseased state of these organs, and their function is clearly recognised to be not that of apparently secreting urine, but of separating from the blood substances which had become useless, and which, if allowed to remain, would prove hurtful.

The names of Aldridge, Golding Bird, Rees, Gairdner, and some others, are familiar as contributors to our information upon the pathology of the urine, and following in the same line our author has occupied no unworthy position. Seeming to be fully aware of the wide extent of the range of animal chemistry, and the great difficulty of presenting in so limited a period as he had at command, viz., the time occupied in the delivery of twelve lectures, a general view of the entire subject, he confines his present effort to the consideration of the relations between certain stomach and renal affections, and more particularly to the elucidation of the effects upon the renal

secretion as well of the due and healthy performance of the function of digestion as of several derangements and arrests of different stages of this process. Even this apparently isolated patch presents a very wide field for research, and, however carefully it may appear to have been hitherto explored, is still able to repay amply further attentive culture.

The three first of the series of lectures before us are occupied chiefly by some interesting observations upon the chemical constituents of food generally; notices of the changes which alimentary matter undergoes in the different stages of digestion; the composition of gastric juice; the nature of organic and inorganic acids found in the stomach, and the sources whence they are derived; and the important actions of oxygen throughout the entire system. And whilst we cannot discover any decidedly new observations or additions to our knowledge upon these subjects, we must admit that the full amount of it is clearly, agreeably, and succinctly stated; and the perusal of these lectures will be of service to any who may not have kept themselves "au courant" in this branch of physiology. The remarks upon sanguification, and the changes which take place in the blood, the method laid down for conducting an analysis of that fluid, and more especially the description of the process for the detection of uric acid when its presence is suspected in gouty and rheumatic patients, are excellent.

Our author then proceeds with the more immediate object of his course of lectures, the development of the connexion existing between stomach and renal affections, and commences this subject by glancing at the formation of urinary calculi, their division, cause of formation, &c. The best method of analyzing, and so distinguishing the varieties of calculi from each other, is clearly set forth, and a very useful table for their ready examination is appended. Next follow the results of some highly interesting and original observations upon the quantity of urine usually secreted in health, its specific gravity and degree of acidity at various times, with notices of the causes influencing each, derived from numerous carefully conducted experiments.

If about fifty ounces of fluid are taken in twenty-four hours, the average quantity of urine in health during winter will be about forty-four ounces, and somewhat less in summer, and the specific gravity of such urine, the individual being on full diet and using moderate exercise, will be 1021. The secretion of urine appears to be most active immediately after breakfast; the quantity passed is diminished by excess of exercise, the specific gravity, however, being increased; and whilst the

nature of the food, whether animal or vegetable, seems to have no effect upon the quantity, it materially affects the specific gravity, which is increased by an animal as compared with a mixed diet. Dr. Jones does not think that much reliance can be placed upon the inferences to be deduced from those tables, which have been constructed with the view of enabling us to judge of the quantity of solid matter contained in urine by the amount of its specific gravity.

"It is said that by taking the specific gravity and referring to the table, the quantity of solid matter may be immediately determined. If the urine were simply a solution of one substance, as, for example, urea in distilled water, such tables could be made to give the truth; but when many different substances are dissolved in water, no tables can be trustworthy. A small quantity of one substance may increase the bulk of the urine more than a large quantity of another substance; or equal quantities of different substances may increase the bulk of equal quantities of water in which they are dissolved to a very different degree, so that the solid residue in each might be equal, while the specific gravities of the solutions might be different. Experiment proves this in the case of the urine. There is no short road to any accurate results. The acid urine must be carefully evaporated at a very low temperature in the vacuum of the air pump, over sulphuric acid, until, on being weighed and re-weighed, it ceases to lose weight. If the urine be not acid the result will be worthless."

He next dwells upon the most important variation in the urine, namely, its acidity. The urine in health is generally acid, but the quantity of acid is continually changing, and the variation is one of health, and not, as has usually been stated, one of disease. By means of a very delicately constructed instrument, with an accurately prepared alkaline solution, he was enabled to measure the degree of these changes, and he found that the acidity of the urine was constantly varying, the variations depending in a great measure upon the different stages of the digestive process and the nature of the food taken. The urine passed at the greatest length of time after food has been taken is generally the most acid, and that passed when digestion is going on is three or four or more times less acid. We know that the contents of the stomach are highly acid during the process of digestion; and it would appear from Dr. Jones' experiments, that at this time the acidity of the urine is at its minimum; whilst after that process has been completed, and the stomach is empty, the urine reaches its maximum degree of acidity. When animal food only was taken, the diminution of the acidity after food was more marked and more lasting

than when a mixed diet was taken. When vegetable food only was taken, the decrease in the acidity was not so great as when animal food was taken.

Dr. Jones ascertained by direct experiment the effects of the exhibition of various acid and alkaline medicines upon the acidity of the urine; dilute sulphuric acid in considerable quantity slightly increased the acidity, but tartaric acid seemed to produce a more decided effect. Liquor potassæ in large doses diminishes the acidity of the urine, but it by no means renders the urine constantly and permanently alkaline; its effect seems to pass rapidly away. Tartrate of potash produced a most decided and rapid effect on the acidity of the urine; 120 grains of pure dry tartrate of potash, dissolved in four ounces of distilled water, made the urine alkaline in thirty-five minutes. There is nothing certain yet known as to the nature of the acid which gives rise to the acidity of the urine; the most probable surmise is, that it is caused by the presence of some acid salt, most likely acid phosphate of soda, rather than by a free acid:

"The nature of the acid is not of great consequence, but the variations in the acidity of the urine in health give practical results of importance. For if you find that the urine passed at one hour of the day is highly acid, you may find that the water made at another hour of the same day, is nearly or quite alkaline; and if you are tempted to prescribe alkalies for the highly acid reaction of the urine made long after food, you may be led to prescribe acids for the alkaline reaction of the urine made soon after food. Thus, according as you may see your patient early or late in the day, he may be put on a course of caustic potash or nitro-muriatic acid. The reaction of test-paper on urine, made at any one hour of the day, should never determine the use of acid or alkaline medicines. The different deposits which take place in the urine are far better tests of the state of the urine and of the necessity for these remedies. If you are guided by the reaction of test-paper, the total quantity of urine made in twenty-four hours must be examined."

Uric acid exists in the urine in the form of lithate or urate of ammonia, but so little reason is there for thinking that the acidity of the urine depends upon the presence of this salt, that Dr. Jones' experiments demonstrate an inverse relation. When the urine is very acid there is usually but little urate of ammonia present; when there is much urate of ammonia not unfrequently the urine is nearly alkaline. The variations of the uric acid in health are of considerable importance, and our author dwells particularly upon these, and points out the best method for their determination. He found that these variations were but little affected by different kinds of food, yet

that in a few hours after food was taken, the amount of uric acid was increased, and long after any food it was excessively diminished. Precipitation of urate of ammonia depends upon the existence of several causes not yet perfectly understood, but amongst those exercising the most direct influence are the states of acidity and alkalescence of the urine.

As regards the precipitation of uric acid crystals, he observes:

"This depends only upon the acidity of the urine, and is quite independent of the quantity of the urate of ammonia excreted, though the quantity of crystals that fall (falls) must depend on the quantity present; but the quality of the precipitate is determined solely by an over-acid state of urine, or, what comes to the same thing, a deficiency of alkali there. Whenever uric acid crystals are found in the urine, it may be taken as a proof that the urine is more acid than it ought to be. Uric acid crystals are, in fact, by far the most delicate and trustworthy test for an over-acid state of the urine. The urine is sometimes so acid, that even in the kidneys, in the ducts of the mammary processes, uric acid crystals may be found. Most commonly, however, twenty-four hours must pass, after the water has been made, before the uric acid crystallizes out from over-acid urine; not unfrequently forty-eight hours are required. The time to some extent varies, not only with the temperature but with the degree of acidity."

The notices in the next lecture of what are denominated the "oxalate of lime diathesis," where an excess of that substance is found in the urine, and of the "sulphuric diathesis," where an excess of sulphates exists therein, are original, evidently the results of much careful observation and experiment, and well worthy of careful study. Most of the conclusions have already been published by the author.

The subject of alkalescence of the urine next occupies attention, and the causes which increase the tendency to this state in healthy urine, such as high temperature, the presence of mucus, &c., are pointed out, and then we have the following remarks:

"Whether the urine be ever secreted ammoniacal is not determined; it is a question very difficult to decide; but it is not a point of practical importance. We know that the change of the urea may take place in the bladder, and even in the pelvis of the kidney, and that this occurs most commonly in cases in which there is inflammation of the mucous membrane of the urinary organs. The mucus effused from an inflamed mucous membrane more readily effects the change of the urea into carbonate of ammonia than healthy mucus does; and in some diseases, as fracture of the spine, the

mucous membrane of the urinary organs is apt to become inflamed, and thence the ammoniacal urine is formed, which, however, is by no means always found in spinal cases. There can be no inflammation of the mucous membrane without the production of pus, and sometimes the amount produced is very considerable. As long as the urine is acid, the pus-globules remain distinct, and do not adhere to one another; but when the urine becomes ammoniacal, the carbonate of ammonia slightly acts on the pus-globules, and makes them adhere together, so that a ropy gelatinous mass is formed, which includes epithelium, crystals of ammoniaco-magnesian phosphate, and granules of phosphate of lime. All these together constitute the ropy mucus seen in cases of diseased bladder. As long as the urine in contact with the globules is acid, this ropiness is absent; but if carbonate of ammonia, or any other alkali, caustic potash, for example, is added to the purulent matter taken from acid urine, the ropiness immediately appears. By agitation, air-bubbles are seen to be prevented from rising to the surface, and the liquid, when poured from one vessel to another, tails, and may be drawn into strings many inches long. As alkalies, by acting on pus, form this so-called ropy mucus, so within the bladder, if carbonate of ammonia is formed from urea before it is excreted, and if pus at the same time be present, ropy urine will be passed. The ropiness always increases after the urine has been standing for some hours."

The alkalescence of the urine, however, does not always depend upon the presence of carbonate of ammonia; and that alkaline state which occurs after food is taken is found to be occasioned by fixed alkalies, viz., carbonates of potash or soda, or by phosphate of lime. It is then shown how the occurrence of precipitates from the presence of phosphates of lime and magnesia are affected by the acidity or alkalescence of the urine, and the presence or absence of ammonia.

Lecture IX. is a very valuable one, containing much interesting matter, and many highly important facts, which may be of much use to the practical physician. The different causes which give rise to and increase the alkalescence of the urine are pointed out, and the distinctions to be drawn between urine which is alkaline from the presence of ammonia, and that which is so from fixed alkalies, carbonate or phosphate of soda, and phosphate of lime, are dwelt upon, and the methods of distinguishing them given. The former state depends upon local disease, and is the result of metataxis, or re-arrangement of the elements of urea. The latter arises in consequence of irritability of the stomach and general disorder, and in its treatment our attention must be directed to this organ rather than to the kidneys, the state of the urine being used as an index of that of the stomach. Both the state of alkalescence from the pre-

sence of ammonia, and that from a fixed alkali, must be distinguished from the true phosphoric diathesis in which an excess of alkaline and earthy phosphates is secreted.

The subject of albuminous urine, one possessing such very great interest for the physician, is, without occupying very much space, ably handled. The ordinary tests employed for the detection of albumen, viz., heat and nitric acid, are those relied upon by our author; but he insists upon the necessity of not depending upon either alone, for nitric acid will precipitate other matters than albumen (as urate of ammonia or urea) from the urine; and when the stomach is weak and irritable, after indigestible food, and during convalescence, the earthy phosphates are liable to be precipitated from urine which is alkaline. Hence the fallacy of the nitric acid test alone is, that it may give a precipitate when albumen is not present. In employing nitric acid and heat some precautions and a nicety of manipulation are necessary to insure success and guard against fallacy. Dr. Jones says:

"I, for quickness, generally try nitric acid first. If no precipitate falls, or forms on standing for a few seconds, I decide against the presence of albumen. If there be a precipitate, I boil the same acidulated specimen of urine. If the precipitate be permanent on boiling, I consider the presence of albumen highly probable. Before I decide, I clean the tube and boil the urine first, and then add a drop or two of nitric acid. The object of cleaning the tube is to free it perfectly from acid, for a small quantity of acid hinders the coagulation of albumen by heat. I have many times known an unclean test-tube, containing merely a trace of strong acid, lead to the assertion, that urine contained no albumen, when a very considerable quantity really was present."

The inferences to be drawn from the presence of albumen in the urine are various, and must depend in a great degree upon the nature of other substances associated with it, to wit, blood-globules, pus-globules, and fibrine. For the discovery of these, and the establishing of the differential diagnosis of calculus, Bright's disease, sequelæ of scarlatina, and inflammation of the mucous membrane, the assistance of the microscope is absolutely necessary. Dr. Jones found the urine in one case to furnish distinct evidences of albumen, but only in the morning; after very close observation he discovered that these were owing to the presence of spermatozoa.

In the lecture upon diabetes we do not find anything very new or striking; that the disease depends upon the arrest or alteration of certain chemical actions is manifest, but the nature of these is not exactly known. The concluding lecture

contains some judicious remarks upon the relation of the urine to the food and the system generally, and this secretion is set forth, as it truly is, as the natural outlet for a very considerable portion of the waste of the entire body. The oxidizing process which is unceasingly going on in the various parts of the frame is then dwelt upon, and the author concludes with some useful hints and directions for the proper examination of the urine. These latter are most valuable.

In concluding our notice of this little work we must say that Dr. Jones has fulfilled what he undertook to do with very great ability, and we shall be glad to meet him again, should he be inclined either to resume this subject or enter upon some other branch of organic chemistry.

A Theoretical and Practical Treatise on Human Parturition. By H. MILLER, M. D., Professor of Obstetrics and the Diseases of Women and Children in the Medical Department of the University of Louisville. Louisville: Cowling and Davies. London: Delf. 1850. 8vo. pp. 463.

On the Theory and Practice of Midwifery. By FLEETWOOD CHURCHILL, M. D., &c. Illustrated by upwards of 100 highly finished wood engravings. Second edition, corrected and improved. London: Renshaw. Dublin: Fannin and Co. 1850. post 8vo. pp. 496.

THERE must be something in the practice of midwifery that tends to promote literary fecundity. Of this we possess abundant proof at the present day, in the constant issue of works on midwifery and its related subjects from the press in England, on the Continent, and in America; indeed, so manifold are they as almost to outnumber the publications on all the other branches of the healing art. The two treatises now before us form a part of the obstetric productions of this year. They possess few characters in common, except that of treating on the same subject; nevertheless, though so widely different, the consideration of each need not detain us very long.

The title of Dr. Miller's book naturally led us to expect that all the leading phases and accidents of human parturition would, as a matter of course, be brought under review, nor was there anything in the preface to discountenance this idea. We were much disappointed, therefore, to find his observations on difficult labour very limited and unsatisfactory; and still more surprised were we at perceiving that some of the most

serious and important complications of labour were wholly unnoticed; in fact, that nearly the entire of the fourth class of Denman, including convulsions, plurality of children, hemorrhage, and prolapse of the funis, together with rupture of the uterus, are all passed over in complete silence, as though such occurrences never attended upon human parturition. How to explain this wholesale omission we are utterly at a loss. The after-treatment of child-bed, and the diseases incident to the puerperal state, are also omitted.

As a sort of apology for adding another to the many treatises on midwifery already existing, we are told:

"This multitude cries aloud for another. While they have disseminated knowledge and enlightened the highways and by-ways of practice, and thus been instrumental in achieving much good, they have unsettled the minds of practitioners in regard to points of deepest interest, and made a wreck of obstetrical nomenclature, as far as the presentations and positions of the fœtus are concerned."

To check these abuses and errors that have crept in, he recommends for general adoption the classification of M. Duges, with a nomenclature of his own, thereby augmenting the evil in his attempt to remedy it.

In the preceptive and practical part of the work, he candidly acknowledges that his principles are essentially the same as those of Hamilton and Burns, the "northern lights," as he facetiously calls them; and he proves himself a zealous disciple of these teachers, by carrying out to the utmost that most irrational and pernicious maxim of their's, "that the termination of the first stage of labour should be secured within twelve or fourteen hours from its actual commencement." The effect of this doctrine upon his practice is probably as marked and extensive as even the original advocates of it could have desired. It pervades the whole book, and in every possible way influences his rules of treatment. No wonder then we find him exclaiming, in reply to some remonstrances of Drs. Churchill and Ramsbotham, that "the os uteri is made of sterner stuff than it has credit for, else it would be unfit for its post." There is certainly no denying but that of late years "the stuff" it is made of has been severely tried, and in a variety of ways! Before sending the second edition of his work to press, we would strongly recommend Dr. Miller to read the correspondence that passed between Dr. Collins and Dr. Hamilton(*a*) relating to this matter, in which he will see that his favourite doctrine will not stand the test of experience, however spe-

(*a*) See former Series of this Journal, vols. xiii. xiv. and xv.

cious and plausible it may appear in theory. Dr. Miller fully admits that in Dr. Churchill's tables of tedious labour (p. 197 of second edition), the opponents of the Hamiltonian school have powerful support, as these statistics show that delay in the first stage is generally unproductive of danger to the patient, and, with few exceptions, does not even predispose to delay in the second stage. Seeing how destructive these tables are to the theory for which he is so uncompromising an advocate, Dr. Miller endeavours to nullify their effect by putting a forced interpretation upon Dr. Churchill's definition of the first stage of labour, and leading us to suppose that it includes most of the second stage also. But surely this is not an ingenuous mode of dealing with an author. By such an expedient a temporary advantage may be gained, but the cause of truth will not be advanced. All throughout his book Dr. Churchill speaks of the first stage in precisely the same sense as Denman does, and though his definition might perhaps be strained to embrace more than that writer's, still this would be doing violence to the author's plain meaning elsewhere. The wording of the passage in question is to this effect: the first stage extends "from the commencement of labour to the passage of the head through the os uteri," (p. 144, first edition.)

When reviewing Dr. Meigs' treatise on "Obstetrics, &c.," in a late Number of the Journal(*a*), we felt it our duty to express strong disapprobation at his recommending the use of the forceps on all occasions where the least delay occurred in the delivery of breech or footling cases. In censuring this rash precept we are happy to find ourselves seconded by a countryman of the Philadelphian professor. On this point Professor Miller remarks:

"I cannot think it judicious or proper to adopt the counsel of the last-named gentleman, to send for our forceps whenever we discover that the nates are presenting, that we may be prepared to extract the head instrumentally as promptly as he recommends; for although it may not be difficult to use the forceps in such a case, instruments ought not to be resorted to under any circumstances where the hand may supersede them, as I believe it always may in the case under consideration, provided it be properly employed, that is, provided the entire hand, and not merely two fingers, as commonly directed, be introduced over the chin."

The first few chapters of Dr. Miller's book are upon the anatomy and physiology of the gravid uterus; and on some

(*a*) No. xvi., November, 1849.

points connected with this subject his remarks are full and interesting, and give evidence of a reflecting and well-informed mind. An inquiry into the determinative or exciting cause of labour next occupies some pages. He is not by any means satisfied with the opinion of Avicenna, that "at the proper time labour took place by the grace of God;" and adds that there is "more piety than philosophy in this hackneyed apothegm, and more indolence than learning in quoting it!" With Dr. John Power, he attributes it to orificial irritation of the cervix uteri, and adduces many facts and ingenious arguments to bear out this theory. He does not seem aware of Dr. Tyler Smith's investigations towards the solution of this obscure question, nor does he make any allusion to the doctrine of ovarian irritation, to the elucidation of which this physician has applied himself so closely and successfully. In the chapter entitled "Obstetric Aptitudes of the Fœtus," our author enters at some length into the consideration of the position of the fœtus in utero at the different periods of gestation; a subject to which a good deal of attention has of late been directed by Dubois, Cazeaux, M'Clintock and Hardy, and Dr. Simpson. He quotes largely from the admirable memoir of M. Paul Dubois, whose deductions on this matter are most original, and founded on a very extensive series of careful observations. The only point wherein Dubois would seem to have erred was in regarding as voluntary or instinctive, movements that should more properly, perhaps, be termed reflex, or excito-motory; but this is little more than a verbal distinction, we think, as the idea present to the author's mind might almost have been represented by either of these terms.

We are much surprised that Dr. Churchill, to whose book we now turn, should, in his remarks on the position of the fœtus in utero, have taken no notice whatever of M. Dubois' memoir. Indeed on this and one or two other subjects of a kindred nature, his work is not as much *au niveau* as might have been expected from an author of such extensive reading and unwearied industry. But the volume can amply afford these small detractions. It is already well known to the profession, and that it is held in high estimation is sufficiently testified by the facts of a second edition (the first having consisted of 2000 copies) being called for at home, and of a *third* American edition being in process of sale. To bestow praise on a book that has received such marked approbation would be superfluous. We need only say, therefore, that if the first edition was thought worthy of a favourable reception by the medical public, we can confidently affirm that this will be found

much more so The lecturer, the practitioner, and the student, may all have recourse to its pages, and derive from their perusal much interest and instruction in everything relating to theoretical and practical midwifery.

Since the former edition of Dr. Churchill's work appeared three subjects of grave practical importance have come under the attention of accoucheurs in these countries, and have occupied a conspicuous place in the obstetrical literature of the last few years. If they have not all originated in the same school, they at least have all had the able advocacy and strenuous influential support of Professor Simpson, to procure for them recognition amongst the established rules of our art. On each of these points Dr. Churchill bestows a fair share of consideration, unmixed with prejudice or personality.

The use of chloroform in midwifery, its advantages, disadvantages, and effects, are fully and impartially set forth. The propriety of administering anæsthetics in natural labour is the question which has proved most fruitful of dispute and contention. Our own rule has been not to give it in this class of cases, unless at the special request of the patient; and not even then if the least contra-indication be present. Dr. Churchill's recommendation substantially agrees with this.

"As to its exhibition in natural labour, as I do not believe that in the large majority of cases convalescence is at all impeded by the suffering, I cannot see the *necessity*, or even the propriety, of urging the employment of anæsthesia in every case; and I do feel that even greater caution ought to be used than in operative midwifery. We may be justified in running some risk where an important point is to be gained, such as perfect quietness during an operation, which we should not be justified in incurring merely to relieve pain. Thus in hysterical or nervous patients, in those labouring under nervous affections, or organic disease of the lungs or heart, &c., I do not think we ought to employ it . . . . . In my own practice I have never urged a patient to use chloroform in natural labour; and, on the other hand, I have not felt justified in refusing a moderate dose of it when the patient urgently desired it, and none of the conditions were present which seem to me to counter-indicate it."

Although these two passages do not immediately follow each other in the original, yet in justice to the author it was necessary to quote them both; as a hasty or prejudiced reader, lighting on the former paragraph, might, though most unjustly, charge Dr. Churchill with giving or withholding chloroform as the patient herself prescribed it or not. This valuable agent, on its first introduction, shared the fate of all new remedies; indeed there was no reason why it alone should enjoy exemption. By some

it was extravagantly and indiscreetly extolled; others attributed to it hurtful properties which it did not possess; whilst a third class ignorantly denounced its employment in midwifery as being wicked and impious. But now, according as the heat of dispute and controversy is passing off, men's minds are regaining their wonted equilibrium, and chloroform is beginning to find its proper level, so that ere long we may expect to see it holding its true position in the list of obstetric agents.

The next part of Dr. Churchill's book which calls for our notice is that containing his remarks upon the substitution of turning, in certain cases of pelvic deformity, for craniotomy. The practice here commented upon is no new proposal. Sir Fielding Ould, the immediate successor of Bartholomew Mosse in the mastership of the Dublin Lying-in Hospital, thus described it in the year 1741:—"Here I must beg the reader's leave to mention one thing, which I own I never yet attempted to put in practice; however, as it carries a very promising appearance of success, it shall be submitted to his censure. Suppose a woman in labour who by the experience of a former delivery was found by the operator to have the passage through the bones of the pelvis so narrow as to refuse an exit to the child (though not of an extraordinary size) by means of the common efforts of nature; and that on this account it died, or was destroyed by instruments, for the preservation of the mother's life; in this case there is a strong probability of saving the child by introducing the hand when the membranes break, and bringing it forth by the feet, with a strict observance of all the precautions already taken notice of for that purpose." As Sir F. Ould's treatise on midwifery is rather a scarce book, we make no apology for this quotation.

Denman, whose acuteness and sagacity let nothing escape him, has remarked "that cases may occur in which, by turning the child, the chance of saving its life is greater than can be gained by the use of any instrument;" and of this he gives a very striking example which happened to himself. Still with this instance fresh in his mind he writes: "But the success of such attempts to preserve the life of a child is very precarious, and the operation of turning a child, under the circumstances before stated, is rather to be considered among those things of which an experienced man may sometimes avail himself in critical situations, than as submitting to the ordinary rules of practice."

Velpeau clearly pointed out certain forms of pelvic distortion in which the operation of turning is capable, he thinks, of bringing away a living child, where otherwise delivery

would have been impossible without mutilation of the mother or fœtus. As this has been denied we think it well to quote his own words:—" Lorsqu'il n'y a qu'un des *diamètres obliques* de vicié, il en resulte ordinairement une disposition fort importante a noter. Si c'est à droite, par example, comme l'a vu Smellie, et comme Stein en donne plusieurs figures, qu'existe le resserrement, le côté gauche pourra presenter un excés d'amplitude. Dans ce cas, si la tête vient l'occiput à droite, l'accouchement exigera presque nécessairement des secours, tandis que, s'il s'était présenté à gauche, la nature aurait pu se suffire à elle-meme. Cette remarque indique assez que, pour rendre l'accouchement facile chez une femme ainsi conformée, *il suffit d'opérer la version, et d'amener le fœtus en première ou seconde position des pieds;* de telle sort que l'occiput puisse correspondre au côté le plus large du détroit." In illustration of these remarks he relates the case of a woman whose accouchement he brought to a happy issue by this proceeding, although the history of her former labour fully justified the belief that contraction of the hard passages existed.

Cazeaux has improved on this hint of Velpeau's, and described more in detail the cases suitable for this method of treatment. Jacquemier, a later writer, also notices this proposal; and moreover states that Madame Lachapelle and Osiander both consider version a mode of delivery preferable to any other in certain malformations of the pelvis. None of these writers seem to hold the opinion of the head being more compressible under tractile than expulsive efforts, as they give it no place in their reasoning; but that they all fully recognise the greater narrowness of the bi-temporal as compared with the bi-parietal diameter of the head is manifest by their directions to bring it to correspond with the contracted portion of the brim.

Lastly, we find Professor Simpson warmly adopting the practice, and exhibiting great labour and earnestness in its defence. Not only does he support it by much clever reasoning, but calls in to his aid the never-failing succour of statistics. Now, though we fully acknowledge the vast importance of numerical calculation in the discovery of general laws, and recognise it as the ultimate appeal for the solution of many great practical questions, in medicine as well as in politics; still it cannot be denied that its results are very liable to be influenced by the manner and spirit in which they are sought. Furthermore, as a general rule, we *strongly object to receiving any kind or amount of collateral statistical evidence as adequate proof of the efficacy of an untried practice.* This is a usurpation

which should be denounced as incompatible with the very nature of medicine; and if the principle were once established, it would open a door for the admission of many novel practical doctrines of a most mischievous kind. But, to return, let Dr. Churchill speak for himself on the practice under consideration:

"Now let us examine into the practical application of his proposal. The bi-mastoid diameter, in the six cases of measurement he (Dr. Simpson) gives, varied from $2\frac{6}{8}$ inches to $3\frac{2}{8}$ inches, and a living child can pass through a pelvis of $3\frac{1}{4}$ inches antero-posterior diameter, with or without the forceps. With a pelvis of this size the operation is then unnecessary, and if the antero-posterior diameter of the pelvis be less than $2\frac{6}{8}$ inches, the operation would be impracticable. Then these are the limits of the operation; for us to attempt to drag a child through a smaller space would be unjustifiable. For the success of the operation, then, we must be able to ascertain that the pelvis is within these limits; and perhaps in some few cases, with whose former labours we are accurately acquainted, we may do this, but in an immense majority of cases it will be, I think, impossible; and it happens, as Dr. Collins has shown, that the greater number of cases of difficult labour he met with were first cases, in which, of course, no such precise judgment could be attained.

"Again, the life of the child is not secured, and its chance but little increased, even if our estimate of the pelvic diameters be accurate, for if, in turning with an ordinary sized pelvis, one-third of the children are lost, the mortality will be surely more than doubled if its diameter be reduced more than one-fourth.

"Moreover, if we should miscalculate the size of the pelvis, or if the head should be a trifle larger than usual, so far from the safety of the mother being increased, it would be very seriously diminished; for you must then craniotomize the child after incurring the hazard of turning, and in a most unfavourable position.

"Lastly, even if we succeed in selecting a suitable case, and in extracting the child, it has yet to be proved that the mother would not incur considerable danger from contusion or laceration in forcibly dragging the child through a narrow pelvis; for I must remind my readers that we have no statistics of the proposed operation to compare with those of the old method; the few cases adduced by Dr. Simpson being of no value for this purpose.

"I must therefore object to the general adoption of Dr. Simpson's plan, for the reasons above stated; the difficulty of ascertaining the exact diameters of the pelvis, the very little benefit to the child, the great risk to the mother of doubling the operation, and the uncertainty of benefit even in suitable cases."

Our own views very much coincide with those just rehearsed. We can readily conceive a case where this operation

would give the fœtus a chance of life somewhat better than what the perforator holds out. We admit this as an abstract truth, and would willingly have recourse to the operation, provided we could be fully assured that the case was exactly a suitable one. But then comes the question, how is this to be ascertained beforehand? or what means do we possess of measuring the relative capacity of the pelvis and fœtal head? Herein consists the practical objection to the measure in any given case; for its limits are so restricted that the miscalculation of a few lines will most effectually frustrate the primary object for which it is intended. Nevertheless the proposal is worthy of some attention, and to make it deserving of general adoption only wants the support of a respectable number of cases in which it was successfully tried.

The third *questio vexata* that we come to is the treatment of unavoidable hemorrhage by artificial separation and removal of the placenta, a practice suggested in the year 1799 by Dr. Chapman, but recently brought into prominent notice by the recommendation of Drs. Radford and Simpson. This our author discusses with philosophic candour and liberality; and although himself rather opposed to its adoption, yet he renders full justice to the arguments of its defenders. Except in the two following cases, he would not consent to substitute the new method of treatment for the old, and even in these cases he wisely recommends the utmost caution:

"In cases of extreme exhaustion, where the mother is unable to bear the shock of turning or any additional loss of blood, if the os uteri be dilated or dilatable and the circumference of the placenta within reach; as the hemorrhage is said to cease after the removal of the placenta, the operation may be admissible for the purpose of gaining time, even with the chance of artificial delivery afterwards.

"In cases where the flooding is considerable, the presentation natural, and the pains strong (the cases in which the placenta is sometimes expelled before the child), there seems to be no objection to arrest the hemorrhage by the removal of the placenta, leaving the conclusion of labour to the natural powers, either alone or stimulated by galvanism, as Dr. Radford has proposed. To these two classes the results of Dr. Simpson's statistics almost exclusively apply."

The sole basis on which this practice rests, and from which alone its claims to supersede the old practice are derived, is the assumption that the hemorrhage ceases when the placenta is entirely detached. This we are assured must take place as a matter of course, if there be any truth in the Hunterian doctrine of the utero-placental circulation. Strange enough, how-

ever, the Hunters themselves did not seem to consider this a consequence of their explanation, much less lay it down as a condition for its acceptance. Had they done so we think it would have effectually arrested the spread of their theory, as the every-day occurrence of some flooding after the total separation of the after-birth would have given the most direct and palpable contradiction to its truth. Consistently with the Hunterian doctrine we believe that blood escapes from the detached portion of a partially adherent placenta; and though, *a priori*, we might suppose the hemorrhage would be suppressed by its complete detachment, yet this specious inference must give place to the fact, which sad experience has too often forced upon our conviction and our memory, that flooding to a profuse, or even fatal extent, may take place from the uterine surface after the complete disjunction and removal of the afterbirth. Here a fact and a theory come into direct collision. Can there be a moment's hesitation which to receive and which to reject?

It has often struck us as a *primâ facie* argument in favour of this practice, that it must have an extraordinary degree of success to recommend it, else, being almost necessarily destructive to the child, it would not have been so warmly advocated by those who, on other occasions, vehemently denounce craniotomy, out of a tender regard for the claims of fœtal life. Writing in 1849, Dr. Tyler Smith very pointedly observes:—"there is one singular circumstance which cannot fail to strike you, when pointed out: this is, that the self-same accoucheurs who, in the matter of placenta prævia, are carrying the principles of our national practice, as I believe, to an injurious extent, are those who attempt to violate them, on the other hand, by adopting in other cases the foreign and antagonistic principles. The same practitioner who one day destroys the child by the detachment of the placenta, will, the next endanger the life of the mother by the Cæsarean section, vacillating between the extremes of either practice"(*a*).

Before concluding we would wish to correct two or three mistakes which a reviewer in the last July number of the Edinburgh Monthly Journal has fallen into. We should not, perhaps, have thought it necessary to notice them, but that Dr. Simpson's name appears as one of the editors of that periodical: wherefore, it is incumbent on us that these misstatements should not remain uncontradicted. After noticing the great frequency of the third cranial position of Naegelé, the reviewer continues:—

(*a*) Parturition, and the Principles and Practice of Obstetrics, p. 11.

"There is now no accoucheur, we believe, of any note, on the continent of Europe, who does not subscribe to the truth of Naegelé's observations on this subject; and since 1828, when Dr. Rigby first translated Naegelé's essay, it has gradually gained more and more converts in England and Scotland. But Dr. Collins, and others in Dublin, long found results different from what were found elsewhere. Dr. Collins enters the occipito-posterior position of the head as occurring in only about 1 in every 1300 labours in the Dublin Hospital. In other hospitals they occur as often as one in every three or four labours." Who are alluded to under the generic title of "others" we are at a loss to imagine; but as regards Dr. Collins, the statement is, in point of fact, untrue. The only passage in his work, on which the above assertion could be founded, is that at p. 33: "In twelve cases the head presented with the face to the pubis." That he is here, however, only speaking of the position of the head at birth,—referring in fact to Denman's second variety of natural labour,—is obvious to any one who takes the most cursory glance at the context. Indeed the rest of the chapter so plainly shows, by evidence both of a positive and negative kind, what his real meaning is, that we are amazed at the reviewer's committing so serious an oversight.

Further on the reviewer makes the following remarks:—"In the article in the 'Dublin Journal,' from which we have already quoted a paragraph, Dr. Montgomery tells us that the Dublin accoucheurs had been told, 'with somewhat less than courtesy,' that 'facts require ten years to arrive in Dublin.' We do not remember to have ever seen or read such a remark in print; but whoever made it proceeded, we opine, upon an undue want of knowledge of the length of time that some facts at least require for transmission in the direction stated. Here, for example, we have a simple but most important fact—the frequent position of the face forwards—a fact of which any tyro may obtain complete evidence, if he only uses his sense of touch with a little care, and without preconceptions or prejudices,—and this fact is not acknowledged in the principal Dublin text-book on midwifery, till upwards of thirty years after it is announced in Germany, and upwards of twenty years after it is announced in England. In writing this statement, we cannot but entertain a confident hope, that many other doctrines and practices, opposed and objected to by the Dublin School, are yet destined to share the same fate." With reference to the remark of Dr. Montgomery's, which the writer did "not remember ever to have seen or read in print," it must be confessed that neither did we, but we saw it in manuscript; and

if the reviewer has any fancy to know who the writer of it was, we shall be happy to inform him; it is more than probable that they are acquainted.

The reviewer's attempt to justify his charge against the Dublin School of Midwifery, is, to say the least of it, a very lame one, and betrays a want of accuracy quite unpardonable in one sitting in judgment on the works of others. Supposing for a moment the allegation to be true, it would not constitute a very serious imputation, seeing that such authorities as Boivin and Lachapelle are at variance with Naegelé on the point in question. Let the facts, however, speak for themselves. "The principal Dublin text-book on midwifery" did not appear till 1842, so that prior to this date it could not have announced anything *pro* or *con;* this must be plain even to the reviewer. The alleged erroneous statement in this first edition of Churchill's midwifery is to this effect: after adverting to the discrepancies among authors as to the relative frequency of the second and third cranial positions, the author candidly observes: "The researches of my friends Dr. Breen, Professor Simpson, &c., have led them to coincide with Naegelé, and if I have not been quite so fortunate, I doubt not that it is because my experience has been less." Such is the evidence to sustain the charge, and we leave it to the reader's honest judgment to decide whether it does so or not. Now, on the other hand, be it observed that in Dr. Maunsell's Dublin Practice of Midwifery, published in 1834, the mechanism of parturition was laid down in strict conformity with the opinions of Naegelé, and the author expressly states why he did so, as "being convinced of their general correctness." Here then we see the principal and only Dublin text-book on midwifery in the year 1834, i. e. *five* years after the appearance of Rigby's translation of Naegelé, and *sixteen* (not thirty) years after the announcement of Naegelé's doctrines in Germany, adopting in every particular the views of this author respecting the mechanism of parturition. We have only one word more to say to the reviewer, and we have done, viz., when giving a quotation from an author not to interpolate words, especially such as alter his meaning, even though they may be included within brackets.

We trust the reviewer of the Edinburgh Monthly Journal will take these hints, as they are intended, in good part.

Recherches Anatomiques, Cliniques, et Expérimentales, sur la Nature et les Causes de l'Emphysème Pulmonaire (Asthme continue des Anciens.) Par le DOCTEUR ROSSIGNOL. Première Partie. Anatomie Pathologique. Avec Planches dessinées par A. Larivoire. Brussels: Gregoir. 1849. 8vo. pp. 122.

THE object of Dr. Rossignol's essay is, as he expresses in his introduction, "to determine those lesions of the lungs which constitute the disease known by the name of pulmonary or vesicular emphysema, to examine their causes, and determine their mode of action."

To effect this, the author, being unwilling to trust solely to the labours of others, especially as so many conflicting opinions exist upon the subject of emphysema, even among the most distinguished pathologists, undertook a series of experiments, which were seemingly conducted with considerable care. The detailed results of these form the bulk of the present publication, which he intends to follow with a second, wherein he will reduce to practice the facts derived from his previous investigations. The present part is accompanied by some very carefully executed lithographs representing emphysema in its various stages, taken both from human lungs in which it had arisen spontaneously, and also from the lungs of dogs in whom it had been artificially excited by the injection of ether into the veins.

After giving a rapid sketch of the general and structural anatomy of the human lungs, into the details of which he enters with a minuteness which rivals that of the Germans, he proceeds to consider the disease itself.

Dr. Rossignol, discarding the term vesicular, admits two kinds of emphysema, *intralobular* and *extralobular*, devoting his present inquiry exclusively to the first variety, and starting with the axiom that the former never merges into the latter, which he considers as being always occasioned by traumatic influences.

Having established the characters and measurements of a great number of healthy human lungs, taken from subjects of different ages and sexes, and mostly from criminals executed in the full enjoyment of health, the results of which are presented in a tabular form, he proceeds to examine the external appearances of emphysematous lungs, and the relation they bear to the parietes of the thorax. In this he agrees with other writers, nor does he establish any new fact.

The great point which he seems anxious to lay down, and which he considers as a discovery of his own, is the mode of formation of those larger cells which characterize emphysematous lungs, and which have been considered by many as resulting from the rupture of the intercellular partitions, and the consequent coalescence of two or more pulmonary cellules into one. In support of his views he details a series of experiments made upon different living animals, in which he endeavoured to produce emphysema by the artificial insufflation of their lungs, as also a number of experiments made on dead bodies, with subjects of all ages; and the conclusion he comes to is, that in animals there is a great difference in the resisting power of the pulmonary tissue; the lungs of rabbits having been rendered emphysemateous, in his experiments, by the gentlest insufflation, while those of dogs resisted the strongest that could be made; those of other animals ranging in an intermediate position: whilst human lungs, even those of new-born infants, never became emphysematous, except when an amount of force was used, far exceeding the limits of an ordinary inspiration. From this he deduces the fact that emphysema from rupture of the intercellular septa is, if not impossible, at least extremely rare, and only to be met in acute cases, the result either of injury or of over-violent exertion.

Our author then passes rapidly in review the opinions of the most distinguished pathologists who have written on emphysema, and proceeds to a description of his mode of investigating the subject, by which method he conceives that he has arrived at the conclusion, that what had been ever before considered as the effect of laceration is caused by *interstitial absorption* or *atrophy*. He thus expresses himself at page 79 of his work:

"Ce travail morbide (l'atrophie) produit d'abord l'amincissement des parois des cavités aeriennes dilatés et des bronches retrecies, puis la perforation des premières en un nombre plus ou moins considerable de points, enfin la resorption complete des unes et des autres."

This, then, is the progressive march of emphysema, according to our author. First, there is dilatation of the air-cells; second, constriction of the infundibula; and third, atrophy and consequent fusion of two or more cells into one. He finally passes to the consideration of the effect which confirmed emphysema has upon the circulation, giving a detailed account of some experiments instituted for the purpose of investigating the subject. On this part of the question, however, we find nothing novel brought forward.

Altogether the short essay of Dr. Rossignol is sufficiently interesting, and we shall look forward with pleasure for the appearance of the second part, in which he expects to develope some practical advantages in the treatment of this disease, as deduced from his prior investigations, which certainly reflect much credit on him, both for accuracy and minuteness of detail.

Observations and Essays on the Statistics of Insanity, and on Establishments for the Insane; to which are added the Statistics of the Retreat, near York. By JOHN THURNAM, Licentiate of the Royal College of Physicians of London, and Medical Superintendent of the Wilts County Asylum. London: C. Gilpin. 8vo. pp. 308.

Report on the District, Local, and Private Lunatic Asylums in Ireland. 1848. Presented to both Houses of Parliament by command of Her Majesty. 1849.

Seventh Report of the Inspectors to Earl Clarendon, Lord Lieutenant of Ireland, and the Right Hon. Maziere Brady, Lord High Chancellor of Ireland, on the Private Lunatic Asylums in Ireland. Dublin: Alexander Thom. 1850.

Outlines of Lectures on the Nature, Causes, and Treatment of Insanity. By SIR ALEXANDER MORISON, M. D., Physician to the Bethlehem Hospital and the Surrey County Lunatic Asylum. Edited by his son, THOMAS C. MORISON, late Resident Medical Officer of the Suffolk Lunatic Asylum. 4th Edition, with Plates. London: Longman and Co. 1848. 8vo. pp. 472.

Contributions to Mental Pathology, with the past and present State of the Insane in Ceylon. By JAMES G. DAVEY, formerly one of the Resident Surgeons of the Hanwell Asylum. London: Churchill. 1850. 12mo. pp. 276.

Short Notes in reply to the above. By J. M. GRANT, M. D., Assistant Surgeon to Her Majesty's Forces. Colombo. 1850. 12mo. pp. 111.

Familiar Views on Lunacy. By the late Medical Superintendent of an Asylum for the Insane. London: J. W. Parker. 1850. Post 8vo. pp. 195.

The Journal of Psychological Medicine and Mental Pathology. Edited by FORBES WINSLOW, M. D. Nos. 10 and 11, for April and July, 1850. London: John Churchill.

Report of Proceedings of the Association of Medical Officers of Hospitals for the Insane in Great Britain and Ireland.

Annual Reports of the District Asylums of Belfast, Maryborough, Clonmel, and Carlow, to March, 1850.

Royal Edinburgh Asylum Annual Report. December, 1849.

Thirtieth Annual Report, Dundee Royal Asylum. June, 1850.

Perth Royal Asylum, Twenty-third Annual Report. June, 1850.

Crichton Asylum for the Insane, Tenth Annual Report. Dumfries. November, 1849.

Suffolk County Lunatic Asylum, Annual Report. 1849.

General Report of the Royal Hospitals of Bridewell and Bethlehem. December, 1849.

Annual Report of the Eastern Asylum, Virginia, U. S. A. 1850.

Papers and Prize Essays on Insanity; read before the Society for the Improvement of the Condition of the Insane. London: published by the Society. 1850. 8vo. pp. 200.

The subject of insanity is so surrounded by difficulties, and the disease so afflictive in its consequences, that more and more should it stimulate those who are still blessed with the *mens sana in corpore sano*, and who are otherwise favourably circumstanced, to aid and assist in dissipating the one and alleviating the other.

It is with this view that we again venture to return to a theme at once intricate and painfully interesting, and, endeavouring to fulfil the duty which devolves upon us as medical journalists, to add our mite to the treasury of psychological information, by placing before our readers such important facts as we can glean from the most authentic sources in this department of medical science,—one which a reference to our pages will prove we have hitherto not been unmindful of(*a*).

The list of publications of various kinds, prefixed to this article, will at once show that the labourers in the field of mental affections are many and able; and yet it is but a selection from a host of others on the same subject, lying before us, of comparatively recent appearance, but which to have included in our present notice would have been inconvenient and embarrassing. We only hold those over for another occasion, when we shall endeavour to make all due amends for their being now left unnoticed.

(*a*) See vol. i. N. S., 452; vol. ii. p. 133; and vol. v. p. 145 *et seq.*

Dr. Thurnam's work on the statistics of insanity has now been for some time before the profession, and has earned for itself a high character for ability and zeal in the compilation. Its author had been for a number of years the resident medical officer of the celebrated institution, known by the name of the "Friends' Retreat," near York, upwards of half a century in operation, but is now the resident physician of the Wiltshire lunatic asylum. The work before us gives every proof that Dr. Thurnam fully availed himself of the great advantages he possessed, in studying mental disease with effect, and embodying his experience in a publication which has taken its place, and justly, amongst the standard books of the day, its pages being replete with valuable matter, statistical and otherwise, connected with insanity; and our only regret is, that, our space being necessarily limited, we cannot afford to quote his important and practical views as largely as we could wish. The first extract we shall make is the following "summary" of the results of treatment in English, Scotch, Irish, and American asylums; which will be read with interest, and from which it will be seen that our own public asylums bear comparison very creditably with similar establishments at home and abroad; in fact, that they are higher in the scale of recoveries than all the rest, and lower in deaths, except in the Scotch asylums.

From the Opening of the several Asylums,	Proportions of Recoveries per cent. of the Admissions.	Mean Annual Mortality per cent. Resident.
Nine English county asylums, receiving paupers, ...	36·95	13·88
Six English county asylums, receiving paupers and (about one-third) private patients, ...	46·87	10·46
Eight English asylums, supported wholly or in part by charitable contributions, for pauper and private patients, ...	40·94	8·93
Seven Scotch asylums, receiving paupers and (about one-third) private patients, ...	42·37	7·52
Ten Irish district asylums, for paupers, ...	48·33	8·7
Five American (U. S.) asylums, for paupers and others, ...	46·82	9·56

On the subject of "mortality" in pauper asylums, the author draws the following conclusion:—"That a mortality which exceeds 12 or 13 per cent. is a very unfavourable one; and

that one which is much less than 10 per cent. is highly favourable."

With reference to "personal restraint," Dr. Thurnam expresses himself very guardedly and cautiously, as might be supposed, he being a disciple of the non-restraint school. He says:

"That the insane may, *in all cases*, be governed by *purely moral means*, I suppose all will regard as an *untenable position;* but still I believe we may conclude that there is no circumstance which more decidedly marks a faulty system, and none which is likely to be attended with more unfavourable results, than an *unrestrained* use of the means of *personal restraint*, whether these consist in long-continued seclusion, or in the mechanical restraint of the body or its members, either by instrumental means or, *what is usually worse, by the physical and manual force* of the attendants."

The italics in the above extract are our own; and we can only say that Dr. Thurnam has fully expressed the views of ourselves, and of all others who have maintained that restraint, under proper restrictions, is occasionally requisite, and cannot be altogether dispensed with, in certain cases.

The section on the "ventilation, lighting, warmth, and cleanliness of the apartments occupied by the insane," is well conceived, and deserving serious attention.

On the internal economy and government of hospitals for the insane, our author observes:

"There may be cases (as where the size of the establishment precludes there being more than one resident medical officer) in which the plan of having a visiting physician, in addition to the resident medical superintendent, may be the best practicable. But in that case the office of the latter, as regards the patients, should be *consulting*, and not *directing*. Which, it may be asked, are the establishments which, as a general rule, have contributed most extensively to our knowledge of insanity and its treatment,—those chiefly under the direction of resident or visiting physicians? And, again, we may ask, without unity of plan, and that energy of action which an undivided responsibility will be generally found to secure, what is it probable will be the character of the moral treatment, or indeed can any moral treatment worthy of the name exist? And what unity of plan can there be, when, instead of a single resident, directing head, availing himself of the observations and assistance of his younger or less experienced colleagues, we have a resident physician or other medical officer, whose responsibility is more or less lessened, as soon as a visiting medical officer enters the house, and who, to a like extent, is at least liable, however inadvertently, to have his authority and influence with the patients depreciated and diminished? It is perhaps hardly possible, except by living in an hospital for the

insane, for any one to be made aware of the disturbing effect which the visits of a non-resident medical officer, even when acting in friendly concert with the resident physician, may produce on the patients. A word, a look, or a gesture on the part of the one, is often sufficient to encourage hopes or excite fears, or, it may be, to revive delusions or propensities, to effect the suppression of which may have been the labour of weeks on the part of the other."

We so far concur in the above, as to have no hesitation in stating it as our opinion that an extern physician should not, most clearly, interfere in the slightest degree with the resident physician, in the management and treatment in ordinary of the patients, and general conduct of the institution, over all of which the resident medical officer should be vested with the entire surveillance and control, and accountable alone to the local authorities; but that he should merely give the benefit of his assistance in purely medical cases: and further, that in the event of a difference of opinion in the line of medical treatment to be pursued, the resident physician should carry out his own views, he being of necessity better acquainted with this peculiar kind of practice. Still we conceive that each larger hospital for insane patients should have an extern physician of eminence and respectability attached to it, to divide the responsibility with the resident officer in essential and more than ordinarily difficult medical cases.

We must here conclude our notice, however imperfect, of Dr. Thurnam's excellent work, one with which the library of every medical man desiring to be acquainted with insanity in its statistical and practical details should be furnished.

The Reports of the Inspectors of Lunatic Asylums in Ireland, the titles of which we have prefixed, are documents of the highest value, and which we have read with great interest and satisfaction. Both are drawn up in a manner very creditable to Drs. White and Nugent, and plainly manifest the zeal, industry, and attention with which they fulfil the important duties devolving on them. As Government officers in a most responsible department of the public service, and as officials, we have every reason to believe that the manner in which they execute their functions gives general satisfaction to all parties coming within the sphere of their inspection. And here we may remark that, until within the last four or five years, the inspection of all lunatic hospitals in Ireland was committed, strangely enough, to the Inspectors-General of Prisons; a combination of duties which was only too well calculated to keep up the vulgar notion that asylums were neither more nor less than a

species of gaols, and that "madness" was, by consequence, if not a crime, at least a disease of degradation. But, thanks to the enlightened spirit of the day, this most improper and unscientific mode of visitation has been obliged to give place to one conducted by professional men, and this, too, by the authority of Parliament; a clause (at the instance of Lord Monteagle, ever the friend of the insane in Ireland) having been added to the 8 & 9 Vict. c. 107(*a*), enacting as follows, viz. (clause 23):

"Whereas it is expedient that more adequate provision be made for the inspection of all lunatic asylums, under this and the hereinbefore recited Acts; now be it enacted, that the Lord Lieutenant, or other Chief Governor or Governors of Ireland, shall be, and he or they are hereby empowered, if they shall so think fit, to appoint one or two duly qualified and experienced persons to act as inspectors of lunatics in Ireland; and on such appointments the functions of the Inspectors-General of Prisons in Ireland, so far as they relate to the inspection of lunatic asylums, or other establishments for lunatics, shall be transferred to such inspectors of lunatics, so to be appointed under this Act," &c.

Under the foregoing provision, accordingly, a new order of things, in connexion with the surveillance of the insane, came into operation in 1845; but in the first instance one inspector only was appointed, Dr. White, who, having been Inspector-General of Prisons, was simply transferred to this new department, for the performance of the duties of which no more "duly qualified and experienced person" could have been selected. Though, on the other hand, we cannot but greatly regret that by this change the prisons have never since had the benefit of one of their inspectors being a medical man, and which it was generally understood, at the time of Dr. White's appointment to them, would for the future be the case. A seceond inspector, Dr. Nugent, was associated with Dr. White in December, 1846, for the inspection of asylums.

From this digression we now proceed to analyze shortly some of the more important features of the Inspectors' Reports. And first we find that their visitations amongst the insane throughout Ireland, during a period of two years, amounted to 564, with an aggregate travelled distance of 14,600 miles; and that, from personal observation and inquiries on these manifold occasions, they felt justified in stating that the district asylums were deserving of the highest commendation for the efficient

(*a*) This Act received the royal assent the 8th August, 1845, and is entitled, "An Act for the Establishment of a central Asylum for Insane Persons charged with Offences in Ireland," &c.

manner in which they were conducted. There is one portion of the Report that shows the advantages to the profession of having medical inspectors. We refer to the statement made where the appointment of Dr. Esmonde White (formerly the visiting physician) as "manager" of the Carlow district lunatic asylum is alluded to, namely, that the Lord Lieutenant had thus recognised the principle of appointing professional gentlemen as resident managers, which was to be carried out for the future in the hospitals for the insane in Ireland. This authoritative announcement we have read with no small satisfaction; but we would be still better pleased to find that so important a matter relating to the due efficiency of our otherwise admirably conducted public establishments for the insane in Ireland, was not to be left to the discretion of any Lord Lieutenant, but that it was mandatory on the part of Government to appoint none but a medical practitioner to the chief office and superintendence of an asylum, in the same manner as in other countries. The title "manager" should be discontinued, now that physicians are for the future to be appointed; and the term "Hospitals for the Insane" should be substituted for "Lunatic Asylums."

As regards new asylums, the Report informs us that six new district asylums had been decided upon by Government, to be built in the following localities, viz., Cork, Killarney, Sligo, Omagh, Kilkenny, and Mullingar. We regret, however, to find that these are to be three stories high, instead of two, which is generally admitted by practical men to be the best adapted for establishments so peculiarly circumstanced. Dr. Conolly says on this point:

"The more experience I have of the duties to be performed in a lunatic asylum, the more strongly I become impressed with the inconveniences attending any part of the building consisting of more than two stories. The third story is difficult of access and egress for the patients; it is unavoidably dull, and it becomes unavoidably neglected. It is equally opposed to good classification and to proper superintendence; and it causes too many insane persons to be included in the same extent of ground, rendering ventilation more difficult, and decreasing the healthiness of the establishment"(*a*).

These are very serious and really cogent and well-founded objections to three-story buildings; and we hope that the Inspectors, who have manifested the most laudable zeal and humanity on behalf of the insane poor of Ireland, will use

(*a*) On the Construction and Goverment of Lunatic Asylums. By John Conolly, M. D., p. 10.

the weight of their influence and position in having the old plan of buildings, as regards the height, continued for the future in any new asylums that may be erected. The proposal of erecting them three stories high is a most miserable attempt to sacrifice utility to what can be but a paltry economy.

The new and existing asylums will accommodate 4500 inmates, which it is expected will be found sufficient to supply the wants of the insane poor of the whole of Ireland.

With reference to the statistics of insanity and idiocy in Great Britain and in Ireland, it appears that in England the ratio of insane persons to the population is as 1 to 870; in Scotland and Wales, 1 to 740; and in Ireland, 1 to about 900: whilst the ratio of the idiotic to lunatics is in England nearly as 2 to 3; in Wales, 2 to 1; and in Ireland, 1 to $2\frac{1}{2}$. These are exceedingly interesting points, and deserving of much attention.

Concerning the admissions and discharges and deaths in the district asylums during the years 1847 and 1848, we collect the following data from the Report before us:

Admitted in 1847, . . .	947	1848, . . .	491
Discharged cured, &c., .	540	„ . . .	600
Died, ...	422	„ . . .	306

By the above a very satisfactory diminution appears in the number of deaths in 1848, and also an increased amount in the number discharged cured, which, as the Report states, is very encouraging.

The Report then goes very minutely into the subject of committing persons to gaol as dangerous lunatics, which we cannot find space to copy. Our opinion is, that a gaol should never be had recourse to for the confinement, however temporary, of a lunatic stated to be dangerous; and we are perfectly satisfied that there is great room for improvement in this respect, at the same time that we see plainly the Inspectors have been attending to it with much vigilance, and will not cease their exertions, we feel confident, till they have the gaol committals altogether abolished; for, above all, it should be remembered that the continuance of the system is but too well calculated to make insanity appear in a criminal light, which every means should be used to do away with.

On the subject of criminal lunatics, and the asylum for this class, erected by Government under the provisions of the special Act of Parliament passed in 1845(*a*), the Inspectors

(*a*) 8 & 9 Vict. c. 107.

enter very largely and ably. From them we gather that the criminal asylum is calculated to accommodate 120 inmates; and that, up to the period of their Report, the criminal insane amounted to 138, of various classes as to crime. We think it is a matter of the first moment that this class should be placed in a distinct institution, and we rejoice to find that Ireland has set the example of doing so.

In Appendix No. I. of the Report is contained a long and important correspondence between the Inspectors and the Board of Public Works, respecting several details in the erection, &c., of asylums, which we regret we can do no more than simply refer to; observing, that, in our view of the matter, the Inspectors alone should be the judges of the fitting size of a room, dormitory, &c., and such points of detail, and not the Commissioners of the Board of Works, who would appear to be inclined to exercise an *imperium in imperio*. We quite agree with the Inspectors that corridors of a good width are of great importance; and which, we think, would be all the better if at least twelve feet in width, and not ten, as the Commissioners insist upon. The low boundary walls we conceive are most objectionable, and will be found, in practice, a fruitful source of annoyance of various kinds, more especially from escapes of patients, &c. And, as regards dormitories, we cannot but regret to find that it is contemplated to have them larger than to contain six or eight as the maximum. Dr. Conolly's views and our own are quite in unison on this subject also. He says:

"In all asylums the proportion of single bed-rooms appears to me too small; and I always recommend architects to have such rooms for at least two-thirds of the number of patients to be received into any proposed asylum. A few dormitories, containing not more than four or five beds in each, are useful in an asylum, ... But in favour of large dormitories, I do not know one good reason that can be advanced. Those who sleep in them are generally discontented. The air of such large sleeping rooms becomes indescribably oppressive when the patients have been two hours in bed; and it never becomes quite fresh and pure, although all the windows and doors are open in the longest and finest day. One patient accidentally noisy, disturbs the repose of fourteen or fifteen; and out of that number there is often some one noisy"(*a*).

The Inspectors, we perceive, intimate it as their opinion, that a class of persons, not strictly paupers, should be admitted into the district asylums as paying patients, at the average cost

(*a*) *Op. cit.* p. 24.

of maintenance; a recommendation which we hope will never be carried into effect, our opinion being that it would be an invasion of the rights of the poor to permit the admission of any patient into our public pauper asylums for payment. It would be opening a door to the gravest abuses and acts of injustice towards the strictly pauper patients; and it would soon be found that parties who could very well pay the lowest rate of board in a private asylum would take advantage of the district asylums, no matter how stringent the precautions might be to prevent the same. There is no shutting of the doors of our public asylums against parties not actually paupers, as the Inspectors appear to intimate. If an affidavit be made that the applicant is a poor person, and that there are not means sufficient to place him in a private asylum, he, as a matter of course, is eligible to be received as a pauper patient, and is received accordingly; and surely if the lowest cost of the cheapest private asylum cannot be met, there need be no hesitation or conscientious scruple in having recourse to a public asylum. Let the district asylums, then, be kept up in their integrity, and not injured in and perverted from their legitimate use by having payment of any kind received. The rights of the insane poor, we emphatically say, ought not to be invaded in this manner; or the position of the non-paying class made a matter of taunt and affront, as it constantly would be, within the walls of the asylums, were a pauper paying class—so to speak—once admitted within their walls.

In Appendix No. III. is a very interesting table (No. 1), showing the total number of insane persons in Ireland (including idiots and epileptics) to be 5678, of whom 2603 were in the district asylums, 432 in private asylums, and the remainder in union workhouses, gaols, and local asylums.

Table No. 8 in the above Appendix contains the total expenditure of the eleven district asylums for the years 1847 and 1848, which in salaries and allowances to officers amounted to £12,218 17*s.* 6½*d.*; ditto to servants, £14,784 14*s.* 10½*d.*: making a total of salaries, wages, and allowances, of £27,003 2*s.* 5*d.* Total expenditure of the two years for patients, £88,280 15*s.* 4½*d.* Average annual cost of each patient for the same period, £17 7*s.* 8*d.*, with a daily average number of patients of 2605¼.

We cannot conclude our analysis of the Inspectors' Report on the District Asylums without again expressing our sense of the admirable manner in which it has been drawn up, and the large amount of really valuable information which it contains, connected with our Irish asylums; nor must we omit to state that the whole management of these institutions is most credit-

able and honourable to all parties concerned in their superintendence.

The next part of our subject we mean to notice is the Report of the Inspectors on the state of the Private Lunatic Asylums in Ireland. We may preface our observation with the following satisfactory extract:

"It is with no small degree of satisfaction we are enabled to acquaint your Lordships that the houses authorized to receive insane persons in this kingdom, notwithstanding the difficulties and discouragement to which many of the proprietors have been subjected from the depression of the last few years, generally speaking, are maintained by them with becoming liberality and order; and that a laudable disposition exists on their part to adopt our suggestions and to meet our wishes.

"During the past year no complaints of severity or unkindness have been transmitted to our office, notwithstanding that the patients are at liberty to communicate by letter with the Inspectors (a very questionable privilege). And although we have visited every private institution three, four, and many even on more occasions, since the date of our last Report, we have had no charge of harshness submitted to us sufficient to warrant any particular investigation.

"The sanitary returns from private asylums have been most favourable, and not a single death from Asiatic cholera has been recorded."

The Report then states that the private asylums generally have distinct residences for each sex, mentioning Dr. Jacob's at Maryborough, as being admirably conducted in this respect; as also Dr. Eustace's at Hampstead, and Dr. Duncan's at Finglas; especially observing on this head that Dr. Gregory, at Bellview, deserved high commendation for the improvement effected by him, in common also with the Retreat Asylum under the care of the Society of Friends.

We observe a remarkably and strangely large proportion of males to females in private asylums, the former being nearly double the latter; this may be accounted for by the excitement and altered circumstances of the country, which in the better classes was more likely to be felt by the males; and yet according to the statistics of insanity in this country, which have been collected with the greatest accuracy, a preponderance of about 16 per cent. appears on the side of females, on an aggregate of nearly 12,900 individuals labouring under imbecility of mind or disordered intellect.

The annexed is a summary of the state of the private asylums, as to admissions, &c., for 1849, with which we must con-

clude this Report, and which, like the one preceding, contains much information well arranged.

In asylums 1st January, 1849, ...	432
Admitted since, ...	130
Total under treatment during the year, .	562

	Males.	Females.	Total.
Discharged cured, ...	34	22	56
„ improved, ...	26	11	37
„ not cured, ...	7	7	14
Died, ...	18	10	28
Remaining in asylums 1st January, 1850,	244	183	427
			562

The professions or employments of the patients admitted in 1849 were as follows:

Males.		Females.	
Army and Navy, . . .	13	Teachers, ...	5
Clerical, ...	4	In general trade, . . .	3
Legal, ...	3	Milliners, ...	2
Medical, ...	2	Religious(?), ...	1
Merchants or Traders, .	27	No occupation, ...	35
Clerks, ...	9		—
Farmers, ...	11		46
No occupation, ...	15	Males, ...	84
	—		—
Total, ...	84	Total, ...	130

Sir Alexander Morison's goodly sized volume "on the Nature, Causes, and Treatment of Insanity," is a very valuable and creditable addition to the literature of the day on mental affections. His field of observation in the treatment and management of the insane has been extensive and varied, having been professionally connected with Bethlehem Hospital for a series of years, besides being the visiting physician of the Surrey County Lunatic Asylum, and consulting physician, "in cases of difficulty and emergency," to Hanwell Asylum. A novel and unique feature in this publication is its containing admirably executed and instructive plates, twenty-two in number, of patients whilst the subjects of insanity in its various forms, and subsequently after recovery had taken place.

The publication before us cannot be said to contain anything particularly novel as regards the treatment of the insane, which, however, detracts nothing from its value. We shall now proceed to give a few extracts from the work, and first as

to the classification of insanity, relative to which the author says:

"The arrangement proposed by Drs. Pinel and Esquirol, founded on the morbid manifestations of the mental functions, appears to me to be best suited to the present state of our knowledge of the brain and of its faculties; it is as follows:

"First, Mania. *Characterized by general delirium.* The mind is vigorous; the ideas are abundant, erroneous, wandering, not under control; the manners are violent, excited, vehement.

"Second, Monomania. *Characterized by partial delirium.* The mind is vigorous; the ideas are few, erroneous, fixed, not under control; the manners are in conformity with the prevailing idea, or trains of ideas, as of pride, fear, grief, &c.; or propensities, as of suicide, &c.

"Third, Dementia. *Characterized by weakness of the intellect, induced by accident or age.* The mind is weak; the ideas are confused, obscure, vague, incoherent, not fixed; the memory is impaired; the manners undecided, childish, silly, easily led; the patients are ignorant of time, place, quantity, money, property.

"Fourth, Idiocy. *Characterized by partial or total absence of the intellect, either congenital or occurring in early life.* The mind is not developed; the ideas are few or none; the sensibility is obtuse; the manners are childish, with occasional transient gusts of passion; the countenance is vacant; the articulation and the gait are imperfect.

"Prognosis. Insanity cannot be said to have a directly fatal tendency, since it happens that persons labouring under it live to an advanced age, particularly if the form of the disease be mild; nevertheless it must be allowed that it frequently exercises an indirect influence in abridging the duration of life. With regard to the probability of curing it, a hasty prognosis is to be avoided, as it is time alone that can enable us to decide. It may be said that the prognosis is more favourable in early than in advanced life, although cases commencing after 60 have recovered. It is more favourable in mania than in monomania. Chronic dementia and idiocy may be considered incurable. The chance of recovery is greater on the first than on subsequent attacks. The probability of cure is greatest in puerperal insanity. When the state of excitement is succeeded by melancholy, and when, after a raving paroxysm of considerable length, the patient inclines to be quiet, and to sleep, the prospect of cure is considerable.

"Causation.—The causes of insanity have been in more modern times arranged into predisposing and exciting. Hereditary predisposition, the puerperal state, and the cessation of the menses, being examples of the former, and moral emotions, as fear, grief, remorse, or jealousy, of the latter. The division our author adopts is that of *physical* and *moral*, the difference from the above being that moral causes do not always act *directly* upon the brain, but sometimes *indi-*

rectly produce insanity. Physical causes grow out of moral, and these frequently lead to insanity.

"Age.—Under the age of puberty the human race is almost entirely exempted from insanity, although instances have been recorded to the contrary. From 20 to 30 is more dangerous for men than from 40 to 50; whilst for women it is the contrary, insanity being more frequent amongst them from 40 to 50 than from 20 to 30. From 50 to 60, also, there are more women than men insane. In both sexes it is found that the disease is absolutely rare before 20, and after 60.

"Occupation.—Labourers and others who are exposed to excessive heat in the open air occasionally become insane, as well as those, also, who are exposed to intense heat from furnaces, as sugar-bakers and glass-blowers. The middle and upper classes are not more exempted than the lower. In particular it has been observed, that those who change an occupation of habitual activity for a life of idleness, frequently become insane. It has been said that artists, musicians, actors, and also poets, are peculiarly liable to the attacks of this disease; but, in admitting this, it must be borne in mind the irregular life to which many of these classes are addicted, as well as the numerous checks and slights to which their self-love and vanity are exposed. Merchants are much exposed to the disease, and the medical profession is not exempted. Lawyers, however, have been said to be less exposed to insanity than any others in a similar rank of life. It appears that the number of insane in the race of kings is in the proportion of 1 to 70. Upon the whole it is found that the two extremes of society furnish the greatest number of insane."

The treatment of the insane, as we collect from our author and other experienced sources, consists in the use of medical and moral means, principally the latter; for in those cases in which all the physical functions are normal in their action, and the general health good, it would be worse than useless dosing the unhappy patient with drugs. Sleeplessness being a general and very troublesome attendant upon insanity, particularly in its first stage, it is a matter of much moment to obtain rest for the patient, and hyoscyamus in pretty large doses is a safer hypnotic than opiates. The regular use of the warm bath, so as to promote the cutaneous exhalations, is of the first importance; and in those cases accompanied by high excitement, the shower bath being allowed to descend upon the patient's head, whilst the warm bath is being used, is much recommended, both together being found very efficacious in allaying excitement. Attention to the alimentary canal is indispensable, but too active purgations should, as a general rule, be avoided; and depletion, whether local or general, is, by the most experienced, discountenanced almost entirely in the treatment of the disease. Nourish-

ing, if not generous diet, well cooked, and regularly supplied, together with warm clothing, should be scrupulously afforded, with as much out-door occupation as possible; for of all the means of employment none is so salutary or productive of good generally to the patient as being engaged in open-air pursuits.

The pathology of insanity, we may observe, is very obscure, and throws little light comparatively on the disease. In some cases the pericranium is found to be very adherent to the skull, and in others it is remarkable for its looseness. With respect to the cerebral mass itself, the most opposite states have been noticed, some brains being very firm and hard, and others unusually soft. The cerebellum, as a general rule, is found softer than the cerebrum. Morbid anatomy has not been of so much utility in our researches into the seat of mental alienation, as it has been in regard to that of other diseased states. It has not hitherto demonstrated the nature of the change produced in the brain; for, except the malformation of the skull and its contents inducing idiocy, nothing that is decisive has been obtained in reference to insanity from any variations in appearance that have hitherto been detected.

"Esquirol," to quote from our author, "opened the bodies of no fewer than three thousand persons who died in an insane state; and yet he says that he would be at a loss to tell what is the precise part of the brain diseased. Greding, Pinel, and Haslam have also drawn nearly similar conclusions."

We must now leave our author, whose volume we strongly recommend to our readers, as being one that will amply repay a perusal of its modest and unassuming, but not less instructive and practical pages.

We have next to notice two recent publications which, for the sake of their authors, we wish had never seen the light. We refer to "Contributions to Mental Pathology," by Dr. George Davey, and "Short Notes" in reply to the same, by Dr. J. M. Grant: "A Rowland for an Oliver"—"the bane and the antidote." Dr. Davey's "Pathology" has most wofully disappointed us. Its title and the author's position made us anxious to read it, as we naturally expected to find, from such a source, a repast, if not a feast, on a subject still hidden and obscure; but we were doomed to reckon without our host; we had the cross but no crown, its perusal leaving us as much unenlightened and unedified as before. The author altogether mistook the proper title of his book, which more properly should have been termed "Contributions to Vituperation."

We cannot avoid expressing our opinion that he has laid himself open to a charge being brought against him, before the tribunal of the professional public, for presenting himself to their notice under questionable pretences. We much regret that during his long voyage homewards from Ceylon the anger and wrath with which he burdened himself from "the land of cinnamon and pearls" had not been allowed to evaporate on the "four winds," instead of being kept so carefully to explode in type at home. These "Contributions" are composed of laudation *usque ad nauseam* on the one hand, and of abuse *usque ad baculinum* on the other; Dr. Conolly, of Hanwell (to whom we perceive the work has been dedicated), being bespattered with the most fulsome adulation *passim*, and Drs. Roe, St. John, and Grant, of Ceylon, as freely beshrewed and abused. Now, to show that we are not exaggerating the character we have given of Dr. Davey's so-called Mental Pathology, we have only to state that the work contains 300 pages, 106 of which are devoted to a preface and an introduction, and taken up more or less with the praise and dispraise of the above-mentioned parties; 156 to three annual Reports of the Lunatic Asylum at Ceylon; and lastly 38 pages to a "postscript" containing the first quarter's Report of the same asylum for 1849, ornamented with further displays of bad feeling, vituperation, and recrimination. We are exceedingly sorry to be compelled thus to express our opinion of Dr. Davey's work, but we had no other alternative; and having now discharged so unpleasant a duty, we have only further to say, that before he accepted the office of "Superintendent of the Asylum at Colombo," as conferred on him by Lord Stanley, the Colonial Secretary, he ought to have satisfied himself what his precise *locus standi* was to be there; but, having neglected to do so, on his arrival at Ceylon from England he should have made a virtue of necessity, conformed himself to the orders of the colonial authorities with the best grace he could, and co-operated with the civil medical officers in a far different spirit to that in which, unfortunately for himself, he thought proper to do. Dr. Grant's "Short Notes" we need not further refer to than to say that his only excuse for giving vent to so much of the "gall of bitterness" was great provocation. Altogether this whole affair wears a most undignified, unprofessional, and unbecoming aspect, and with these few remarks we beg to leave it.

"Lunacy and Lunatic Life," by the late Medical Superintendent of an Asylum for the Insane, is an interesting and unpretending little volume, containing a great deal of practical

and other matter in connexion with insanity, being written in a style calculated to be attractive to the unprofessional reader, and to disseminate no small share of useful information on a subject of great moment to be better understood than it is by the public generally.

" The Quarterly Journal of Psychological Medicine and Mental Pathology," edited by Dr. Forbes Winslow, continues to uphold the high character which it attained at its commencement. The Numbers for April and July are rich in valuable matter; and altogether this periodical is one which is eminently deserving of the " golden opinions" it has won for the able and honest spirit in which it is conducted. We heartily wish it every success, and strongly recommend it to the notice of those engaged in the particular line of professional practice to which it is specially devoted.

Great inconvenience having long been felt by that branch of the medical profession in Great Britain and Ireland devoted to the treatment of insanity, owing to the utter want of anything like a systematic co-operation amongst its members, an effort was at last made to unite them together in a society which was established in 1843, under the name of the " Association of Medical Officers of Hospitals for the Insane;" its members having the following leading objects in view:

1. To communicate more freely the results of their individual experience, and to become better acquainted with each other.
2. To co-operate in collecting statistical information relating to insanity.
3. To assist each other in improving the general treatment of the insane.
4. To meet statedly at some place where there was a public hospital for the insane, and obtaining leave from the local authorities to fully inspect and examine into its entire management, and freely state their opinions thereon.
5. The reading and discussing original papers and essays on insanity, and the treatment and management of the insane generally.

The Association has met accordingly at several asylums, and amongst others at Lancaster, Devonport, Nottingham, Hanwell, York, &c., its last meeting being held, as we find by the Report now before us, at Oxford, which was well attended; and amongst other matters of interest that were discussed and disposed of, a valuable paper was read by Mr. Gaskell,—then

the medical superintendent of the Lancaster County Lunatic Asylum, but since appointed one of the paid Commissioners in Lunacy,—on the Construction of Lunatic Hospitals, in which was advocated a greater separation and detachment of the buildings, in lieu of having one large and continuous structure, as at present usually adopted; a paper which the meeting so fully approved of as to request that it might be published, passing at the same time a vote of thanks to Mr. Gaskell for the able and practical manner in which he had treated so important a subject. The Association we find was very hospitably entertained at the Warneford and Oxfordshire Asylums respectively, both of which institutions having been carefully and minutely gone over by the members, and the more important details of management of each examined into and discussed, a formal minute was made of their high condition, and the satisfaction afforded to the Association by personally witnessing their excellent arrangements in all essential respects.

An Association such as the above is calculated to effect an immensity of good, and will, we trust, obtain, as it should, the continuance and support of all the medical officers connected with our public hospitals for the insane in these countries. We may mention that the secretaries are,

Dr. Hitch, Sandywell Park, Cheltenham;
Dr. Williams, Gloucester County Lunatic Asylum; and
Dr. Stewart, Belfast District Lunatic Asylum.

The separate Annual Reports, to March, 1850, of the District Lunatic Asylums of Belfast, Maryborough, Clonmel, and Carlow, are all very interesting documents, each of which we shall now consider.

The Belfast Report now issued is the twentieth which has been published, the institution being in operation since 1829. It has been drawn up, as usual, by Dr. Stewart, the resident physician, and, as on former occasions, in noticing his reports, we felt it but right to hold them up as models for other asylums, especially as regarded the copiousness and good arrangement of their statistical contents,—one amongst many of the advantages arising from a professional man being the resident of such institutions,—so in the present instance we have again to accord the meed of our applause for the able, concise, and excellent manner in which this one has been executed, and the varied and instructive information its pages afford. During the year we find that the total number of patients under treatment amounted to 384, of whom 207 were males, and 177 females. Of these 52 were discharged recovered, and 21 relieved,

making 73 in all (35 males and 38 females); the deaths were 43 (25 males and 18 females), leaving in the house on the 31st of March, 1850, a total of 268 (147 males, and 121 females). The average daily number of inmates was 267·50, at an average cost for each patient during the year of £12 17*s.* 3*d.*; the total year's expenditure amounting to £3440 16*s.* 4*d.*, which, as compared with the charge of maintaining the English pauper County Asylums, is exceedingly low, where the cost of each patient rates from £18 to £20. Indeed we cannot but here remark, that we greatly fear our Irish asylums for the insane poor, excellently managed though they are on the whole, have entirely too low a scale of dietary. In examining the dietaries of all the district asylums in Ireland contained in the Inspectors' Parliamentary Report, we do not find in one of them what we conceive to be a sufficiently substantial dinner—the breakfast and supper meals we cannot reasonably object to, but the dinner fare should not be made up principally of "broth," not more or less *strong*, but more or less *weak*, it is to be apprehended. The best and most experienced writers on insanity all agree, that the disease is one of debility, especially amongst the poorer classes, and that a nourishing, if not a generous diet should be provided for those suffering from it. It is a most mistaken economy, we feel perfectly convinced, to be so sparing of solid substantial food in our public charitable institutions, especially in hospitals for the insane; and as the times in which our lot has been cast are of the progressive stamp, we hope soon to find that a good dinner of meat during five days at least in each week will be the established rule in our asylums, together with an allowance of malt liquor, an improvement from which we would augur the best results in the treatment of patients so unhappily afflicted: and here too we cannot but remark, and that too with our strongest disapproval, that the authorities of all grades, general, official, local, and residential, are too prone to consider that institution as being the best conducted which is the *lowest* in the scale of pounds, shillings, and pence, and so to hold out as it were a premium to stint the poor patients in every imaginable way. Let legitimate economy as a bounden duty be exercised to the utmost, but let it be secondary altogether to the comforts and proper physical support of our insane poor in this country.

But to proceed with our analysis of the Report of the Belfast Asylum, we find that as regards the alleged causes of insanity in the cases admitted during the year, eighteen were from grief and disappointment; sixteen from intemperance; fourteen from poverty; nine from fright; seven hereditary;

three from fear of want; three from injuries from falls; two from jealousy; one from epilepsy; and in forty cases no cause could be assigned. As to the forms of the disease, there were of mania sixty-seven; monomania, forty-five; dementia, eight. The social condition was:—married, fifty-four; single, fifty-eight; widowers and widows, seven. As to religion, twenty-six were Episcopalians; thirty, Roman Catholics; and sixty-four Presbyterians. There are several other interesting tables, &c., in the Report, which we are obliged to pass by in order to make room for the following extracts:

"Deaths.—The cases admitted during the year of completely exhausted constitutions, which no human means, however sedulously applied, could in any degree meliorate, were much greater than usual, notwithstanding all the precautions taken to avoid the receiving of such, and who are sent in merely, as it were, to add to the mortality casualties. Four died from one to four weeks after admission, seven from one month to three months, four from three months to six months, seven from six months to one year, thirteen from one year to five years, three from five to ten years, two from ten to fifteen years, and three from fifteen to twenty years; total forty-three. The causes of death were as follow, viz.:—general debility, eight, three males and five females; paralysis, six, all males; diarrhœa, five, three males and two females; epilepsy, four, three males and one female; maniacal exhaustion, three, one male and two females; pulmonary consumption, three, two males and one female; scrofulous affections, two, females; bronchitis, two, males; epidemic cholera, two, females; apoplexy, one, female; disease of knee-joint, one, male; rupture of a blood-vessel one, male; uterine disease, one, female; puerperal fever, one, female; typhus fever, one, male; chronic cerebral disease, one, male; gastric disease, one, male; total, forty-three. The ages of the deceased were: from 20 to 30, twelve, six males and six females; 30 to 40, ten, seven males and three females; 40 to 50, eleven, five males and six females; 50 to 60, seven, five males and two females; 60 to 70, three, two males and one female. The youngest of the males was 20, the oldest 63; the youngest of the females was 22, and the oldest ditto 62. Average age of all, 40⅔ years.

"General Treatment; Restraint; Recoveries.—The same principles as hitherto continue to be sedulously acted upon, in the general treatment of the patients, and with equally satisfactory results. Every reasonable indulgence is freely afforded to them compatible with their safety and proper discipline; and no restraint by mechanical means permitted that can possibly be avoided. One grand principle is ever kept in view, and that is, to act towards them and treat them as if they were perfectly sane; a principle which is of the utmost importance, not only as regards themselves, but also and especially as regards the attendants who are earnestly importuned to hold the same steadily in view, in all their inter-

course with, and conduct towards, them. The number of recoveries, during the year, it will be seen, amounted to fifty-two, which, on the total number treated, embracing chronic and recent cases, was in the proportion of 14 per cent. nearly, or if calculated on the 'new cases' (amongst which the greatest amount of recoveries necessarily occurs) was about 45 per cent.

"APPOINTMENT OF DR. M'CORMAC.—Soon after Dr. Thomson's decease, Dr. M'Cormac, a long established and eminent practitioner of Belfast, was appointed visiting physician by the Lord Lieutenant, since which he has been regularly attending the Institution, and taking much interest in its welfare, and the advancement of its benevolent objects.

"Dr. Mulholland's duties, it need scarcely be stated, continue to be fulfilled in their usual regular and effective manner.

"'OFFICIAL INSPECTION.—In my inspection of the Belfast Lunatic Asylum, this day (June 5, 1849), I found the house itself in its usual state of order and cleanliness, whilst the patients, judiciously employed and carefully attended to, reflect the highest credit on the resident physician, Dr. Stewart. This being my first visit since the death of our late amiable and highly-informed attendant physician, Dr. Thomson, I deem it but justice to his memory to state, that with the utmost professional care of the inmates of this establishment, he conducted himself with a delicacy towards the governors, and various officers of the Belfast District Asylum, so as to command their unqualified respect and admiration. I trust that the same most desirable system, which heretofore characterized the management and treatment of lunatics, in this Institution, will be continued, satisfactory as it must be to all parties, and eminently beneficial to the patients.

"(Signed), 'JOHN NUGENT.'"

According to the Report (seventeenth) of the Maryborough District Lunatic Asylum, there have been received into it since its opening, from 1st April, 1833, to 31st March, 1850, a total number of 868 patients,

Of whom were discharged cured or relieved, .	462
Ditto, unrelieved, ...	33
Died, ...	199
Remaining in Asylum, March 31, 1850(*a*), .	195

(*a*) We give these numbers as we find them in the printed Report; but they are not correct: "the unrelieved," for instance, should have been brought out in the "total" column 43, and not 33; viz.:—"King's County, 14; Queen's County, 20; Westmeath, 7; Longford, 2," = 43. Again, it will be seen that, on adding the "discharges, deaths, and number remaining," which should correspond with the total number of admissions, a gross amount of 889 is produced, or, more correctly (on including the above error of 10) 899, thus making the considerable difference of 31.

Return of patients for one year, to 31st March, 1850:

Admitted from 1st April, 1849, to 31st March, 1850, . .	43
Re-admitted, having relapsed, same period, ...	11
Discharged cured, or relieved, same time, ...	37
Died, in one year, to 31st March, 1850, ...	19

The sexes have not been given in the above return; but of the 195 remaining in the asylum on the last day of the year, we find that there were 97 males and 98 females, which is a very remarkable correspondence as to sex.

The dietary consists of a quart of stirabout made of eight ounces of oatmeal, and one-third of a quart of new milk, for breakfast each morning; for dinner, on four days in the week, the allowance is twelve ounces of "bread" for males, and ten for females, with a pint of buttermilk or skim milk; and the same meal, for three days, consists of a quart of soup made of half a pound of "beef and bone," or beef heads, with twelve ounces of bread for males, and two ounces less for females; and for supper six ounces of "white bread" and one-third of a quart of new milk are served out each evening. The cost of the above diet is stated to be $4\frac{1}{4}d.$ per diem, which in all conscience is low enough. The medical officer, as a matter of course, is authorized to change the diet for any patient as he may consider necessary. The total farming produce for the year amounted to £144 12*s.* 5*d.*, and the total sum expended in the maintenance of the establishment during the year was £3432 17*s.* 8*d.*, which made the average cost per head of each patient £17 8*s.* 6*d.* Ample and varied employment for the inmates is provided, none of these being unoccupied who are at all capable of being employed, which speaks very well for the institution.

We had nearly forgotten to observe, that the "total non-restraint" system is stated in the Report before us to be "strictly adhered to," a statement which we do not mean to doubt in the slightest degree, neither its feasibility; but still we are much at a loss to understand how it can be said to be "strictly adhered to," when, in the same paragraph announcing this so pointedly, we find this sentence:—"Strong dresses are provided for such patients as destroy their clothing, and are so secured that they cannot strip themselves. Such patients have the free use of their hands [what of their arms?] and feet [what of their legs?] at all times." If this be "strict adherence to the total non-restraint system," we confess that we have hitherto misunderstood its meaning.

The Annual Report of the Clonmel Lunatic Asylum, drawn up by Dr. Flynn, the resident physician, is a very well-ar-

ranged and satisfactory document, evidencing much care and ability, and containing a large amount of interesting matter, but so pressed are we for space, that we are compelled to be very brief with our notice of it. The Report shows that the number of patients under treatment during the year was 163 (83 males, 80 females); the discharges in cured amounted to 24 (11 males, 13 females); and two (one of each sex) were discharged not cured. The mortality was very low, being 9 only (7 males, 2 females). The causes of death were as follow: cholera (Asiatic), 1; general debility and exhaustion, 3; dysentery, 1; epilepsy, 1; anasarca, 1; general paralysis, 1; and one for which no cause has been assigned. The following are the employments of the patients:

Farm and garden, . . .	20 males,	0 females,
Pumping water, ...	3 „	0 „
Miscellaneous, ...	4 „	3 „
Washing in laundry, . .	0 „	13 „
Assisting in wards, . . .	7 „	8 „
Spinning, ...	0 „	2 „
Knitting, ...	0 „	6 „
Needlework, ...	0 „	8 „
	34	40
Idle, ...	30	21
Ill in bed, . .	0	3
	64	64

In this asylum it will be seen that the sexes are exactly the same, and that in Maryborough there was but a difference of one, which are unusually close approximations.

The "actual" sum expended during the year in maintenance, &c., was £2304 3*s.* 9*d.*, the average cost of each patient being £17 10*s.* Dr. Flynn makes some remarks on the subject of recovered patients being unable to be given over to responsible persons to take charge of them on leaving the asylum, a difficulty which he intimates "a clear and comprehensive Act of Parliament" could prevent; but we fear greatly no Act of the Legislature, comprehensively and clearly framed as it might be, could provide for the removal of a difficulty of the kind. All similar establishments are continually meeting with such cases. Referring to the Inspectors' efforts to have medical men as superintendents, the following complimentary allusion is made:

"I cheerfully bear humble and disinterested testimony to their (the Inspectors') frequently and emphatically expressed desire to aid

in removing those prison barriers which, until a recent period, so sternly and so successfully excluded medical men of *all* colleges from their legitimate position as resident medical superintendents of essentially medical institutions; over which in England, Wales, and Scotland, as well as in every other civilized country in the world, *none but medical men of the highest attainments can legally preside.* This desire on the part of the Inspectors has been well and ably seconded by the substantial labours of many of the leading medical periodicals of Great Britain and elsewhere, to which the members of the profession in Ireland owe a deep and lasting obligation."

In our review of the Inspectors' Parliamentary Report we have mentioned their satisfaction in being enabled to state that the Carlow Lunatic Asylum had now the advantage of being superintended by Dr. Matthew Esmonde White, formerly its visiting physician. His own Report of that institution comes next before us, and it is almost needless for us to say that its compilation reflects much credit on him, being succinct, comprehensive, and exceedingly well arranged.

We shall now give a short summary of the Report, commencing with Table I., which refers to the admissions, &c., during the year :

	Males.	Females.	Total.
Admitted to 31st March, 1850, .	24	24	48
Relapsed cases, ...	6	5	11
Cases remaining 31st March, 1849,	108	90	198
Total under treatment during the year, ...	138	119	257
Discharged recovered, ...	12	14	26
,, relieved, ...	4	6	10
,, unfit, ...	0	1	1
Escaped, ...	2	0	2
Died, ...	10	7	17
Total discharged, died, &c., . . .	28	28	56
Remaining 31st March, 1850, . .	110	91	201

Twenty of the patients admitted were between 20 and 30 years of age; seventeen between 30 and 40 ; fifteen between 40 and 50; five between 50 and 60; and two were under 20.

Of the causes assigned for the disease, the largest number, 14, were of an hereditary nature; 11 from embarrassed circumstances; 5 from fever; 5 from grief; 3 from epilepsy; 3 from fright ; 3 from intemperance ; 2 from over mental exertion ; and 1 from cholera : thus showing that the physical causes

were 26, and the moral 21. In twelve cases no cause could be stated.

Religion.—Protestant, 5; Roman Catholics, 54.

Social State.—Married, 17; single, 30; widows, 3.

Unknown.—9.

The married state, then, would appear to effect much in favour of sanity.

Occupation.—22 were of the agricultural class; 16 of the class of house servants, &c.; 4 each of the mechanical, commercial, and studious rank; 2 military; and 7 unknown.

Education.—Well educated, 9; writers and readers, 19; readers only, 12; uneducated, 14; unknown, 5.

Here, unfortunately, education appears to weigh down largely the insane scale; but no fair conclusions can be drawn on this or any other point from an isolated Report; at the same time that it is somewhat unusual to meet with so large a number of the educated as subjects of the disease, mental culture being generally considered a prophylactic against its attacks.

Causes of Death.—5 from phthisis (a prevalent disease amongst the insane); 4 from exhaustion and marasmus; 3 from apoplexy; 1 each from cancer of the liver, dysentery, epilepsy, pneumonia, and paralysis peculiar to the insane (termed general).

By Table XV. we perceive that the inmates to the amount of 152 were engaged in various useful employments; a very large proportion, indeed, and very satisfactory, too. The quantity of profitable and useful work executed during the year is given in detail, and cannot but be considered most commendable.

The dietary is nearly the same as in Maryborough, only that the supper meal is more liberal.

The gross expenditure of the year amounted to £2991 14*s.* 8*d.* (making the average cost of each patient £15 0*s.* 8$\frac{1}{8}$*d.*), in which we see included the large sum of £30 13*s.* 6*d.* for that odious weed, tobacco. We would respectfully request Dr. White to endeavour to banish its use from his otherwise excellently conducted institution We know it is more or less sanctioned in all our asylums, but it is high time to put it under the "total restraint" system.

One more extract, and we must close our notice of this valuable Report, the whole scope and spirit of which reflects no small credit on its learned author. It is as follows:

". . . . . The medical profession should feel deeply grateful to the Inspectors-General and the Government for establishing this new system (that of having resident physicians); and I feel satis-

fied it will, on further trial, be found to work equally well in promoting the comfort and recovery of those under our care in the district asylums of Ireland, as in affording the members of the profession a fresh field wherein to labour for the advancement of scientific knowledge, and the increase of the usefulness, the honour, and dignity of the medical profession."

The Annual Report of the Royal Edinburgh Asylum for the Insane, on our table, is for the year 1849, and we have perused it with much satisfaction. Dr. Skae, the resident physician of the establishment, is a gentleman holding a high place for professional talent of the first order, and whose conduct of the Edinburgh Asylum has won for it the greatest and not less deserved praise. We have had an opportunity of personally visiting this asylum ourselves, and can therefore bear the fullest testimony to its excellent and humane management in all respects. The Report, as drawn up by Dr. Skae, is a very elaborate one, going very minutely into details, all, too, of an interesting and instructive character, but which, unfortunately, from the length to which this article has already extended, we cannot more than allude to. The section under the head of "spontaneous applicants," is both curious and instructive, especially the account which a patient wrote of his own case and feelings, which Dr. Skae has inserted in the Report. The "occupation" of the inmates is another important item in it, as also the account given of their amusements.

	Males.	Females.	Total.
The amount of patients in the Asylum at the close of 1848 was .	228	245	473
Admitted during 1849, ...	109	156	265
Total under treatment, . .	337	401	738
Discharged, ...	71	112	183
Of whom were cured, ...	42	77	119
„ „ uncured, ...	29	35	64
Died, ...	42	37	79

The ratio of recoveries was 45 per cent. on the admissions, or 25 per cent. on the mean number resident.

In the table of causes of disease in those admitted, we find forty-nine arose from intemperance (being 18·5 per cent.), a cause which Dr. Skae observes "has numbered its victims with as much certainty, and even more frequency than in former years."

The causes of death were as follow:—phthisis, 17 (5 males, 12 females); diarrhœa, 14 (10 males, 4 females); dysentery, 8

(3 males, 5 females); general paralysis, 11 (8 males, 3 females); pleuro-pneumonia, 6 (2 males, 4 females); apoplexy, 4 (2 males, 2 females); exhaustion, 4 (2 males, 2 females); epilepsy, 3 (1 male, 2 females); chronic abscess, 2 (1 male, 1 female); bronchitis, 2 (1 male, 1 female); paralysis, 1 (female); pneumothorax, 1 (male); pericarditis, 1 (male); heart disease, 1 (male); peritonitis, 1 (male); strangulated hernia, 1 (male); chronic vomiting, 1 (female); erysipelas, 1 (female).

The Dundee Royal Asylum for Lunatics has published its Thirtieth Annual Report, to June, 1850. Dr. Wingett is the resident medical superintendent, having been comparatively recently appointed to that office, the duties of which the Directors state he discharges with the utmost zeal, ability, and attention. The Dundee Asylum has always maintained a very high character, in common with the other establishments for the insane in Scotland, all being most admirably and humanely conducted, and all having the advantage of the superintendence of professional men of the highest worth and attainments. This asylum had under treatment during the year, 257 patients (135 males, 125 females), 28 of whom (13 males, 15 females) were discharged cured, and 10 (3 males, 7 females) improved; 4 (1 male, 3 females) by desire; and 11 (8 males, 3 females) died; leaving in the house on the 17th June, 1850, the total number of 204 (107 males, 97 females). The daily average number of patients was 200. This institution, in common with all the Scotch asylums, receives, besides pauper patients, those of the wealthier classes also, who are provided with every attendance, &c., according to the rate of board that may be fixed upon, an arrangement which seems to work well there.

The Twenty-third Annual Report of the Perth Royal Asylum, to June, 1850, gives a full and satisfactory account of the state and general management of that institution, which, at the conclusion of the year, contained 168 inmates (91 males, 77 females). The discharges, &c., were as follows:—recovered, 24 (11 males, 13 females); improved, 3 (males); unimproved, 1 (female); died, 12 (4 males, 8 females). The total number under treatment during the year was 208 (109 males, 99 females). The recoveries in this institution since its opening have been on an average 41·90 per cent. on the admissions, and the mortality unusually low, which, however, we observe is the case in the Scotch asylums generally.

The Crichton Royal Institution for Lunatics, at Dumfries, is second to none in Scotland for superior and eminently humane and scientific management. It is presided over by Dr. W. A. F. Browne, who has been attached to it as resident physician since its opening, about eleven years ago,—a gentleman of very superior professional attainments, as his Reports so fully evidence, always containing matter of a very original, elaborate, and suggestive character. The one now before us is the tenth, being the last published, which is up to November, 1849, and from which we learn that there were 201 under treatment during the year, 26 dismissed recovered, 5 removed or improved, and that 4 had died, leaving 166 in the asylum in November, 1849. The causes of death were:—hydrothorax, 1; intestinal ulceration, 1; paralysis, 1; syphilis, 1—a singular enough cause of death in a lunatic hospital.

According to the Annual Report of the Suffolk County Lunatic Asylum for the year 1849, drawn up by the resident physician, Dr. Kirkman, we perceive that that asylum has been established twenty-one years, during which period the admissions were 1604; the recoveries and relieved, 852, and the deaths, 492. The year's Report is as follows:—in the house, December, 1848, 262 (123 males, 194 females); admitted since, 80 (25 males, 55 females); total under treatment during the year, 342 (148 males, 194 females); of these were discharged cured, 44 (10 males, 34 females); relieved, 14 (9 males, 5 females); removed, 1 (male); escaped, 1 (male); and died, 30 (9 males, 21 females). The recoveries are stated to have exceeded any year since the asylum was opened, and the deaths to have been an average. On the subject of associating the criminal insane with ordinary patients, Dr. Kirkman makes some very just and appropriate remarks, observing that the universal testimony of medical officers of asylums is against the continuance of so pernicious a system, and refers to the satisfactory change made in this respect in Ireland by the founding of a criminal lunatic asylum, where all who have been guilty of criminal acts, and acquitted thereof on the ground of insanity, are to be kept confined, and no longer placed in the district asylums. The Report contains the particulars of a very interesting case, that of a female patient, who laboured under the delusion that God had abandoned her, and that she had lost her spirit, and had no soul, connected with which Dr. Kirkman makes some very judicious remarks as to the improper manner in which "the ultra-Calvinistic doctrines of repro-

bation" are pressed on the minds of susceptible and desponding persons, from which confirmed melancholia too often results.

The Bethlem Hospital Report for 1849 is compiled in a very clear and satisfactory manner; it states that the number of curable patients admitted during the year was 316 (124 males, 192 females); of whom 172 (66 males, 106 females) were discharged cured. The deaths amounted to 24 (10 males, 14 females). On the subject of attendants upon the insane, the Report very properly states the importance of insuring a superior order of such, as so much must necessarily be left to their discretion and management: and as regards the restraint of the insane, it gives a table showing the number under mechanical restraint to have been remarkably small during the year, with this pithy and "common sense" remark, that "to suppose that restraint is never necessary is overstraining the bounds of common sense. To reduce it to its lowest limits compatible *with safety* is an obvious duty."

The Lunatic Hospitals on the other side of the Atlantic are in general institutions of a high order, and deserving of the greatest commendation for the able and liberal manner in which they are conducted. But this article has already so far exceeded our limits that we cannot now do more than glance at one of them, the Eastern Asylum, in the city of Williamsburg, Virginia, of which the Report for the year 1849, compiled by its resident physician and superintendent, Dr. John M. Galt, is on our table. It tells us that the number of patients remaining in the asylum at the close of the year was 181 (107 males, 74 females); that the number received during the year was 50 (33 males, 17 females); the discharges 9, 7 as recoveries (5 males, 4 females); and the deaths 25 (13 males, 12 females).

The following observations on epileptic insanity we deem important, and give at length:

"Epileptic insanity is usually considered incurable. Epilepsy, I may be allowed to remark, seems now to be deemed more amenable to treatment than it was formerly supposed to be. Nitrate of silver is a remedy that has been lately more relied on than any other medical means. One of the most striking cases of benefit from its use has recently been communicated to me by Professor Laycock of Indiana. The disease in this instance was of twenty years' standing, and of very severe grade. It commenced at the age of four years, the paroxysms increasing from being monthly to tri-weekly. The patient was a robust man, and a hard labourer. No change was instituted in exercise or diet. The treatment was continued with oc-

casional intermissions for twelve months. The effect upon the skin was not perceivable by the patient or his friends, but Dr. Laycock detected it by close scrutiny, whereupon the medicine was discontinued. Since that period two years have elapsed without any return of the disease. The formula was as follows:—Nitrate of silver, one drachm; extract of gentian, half an ounce: to be made into 120 pills, of which one is to be taken three times a day, and gradually increased to twelve."

On the subject of diarrhœa, Dr. Galt remarks very truly, that it is a common disease in lunatic asylums, apart from the variations of seasons, and often passes into intractable dysentery. "So liable," observes Dr. Galt, "are the insane to such maladies, that many writers on mental alienation devote special remarks to diarrhœa and its kindred affections."

In conclusion we will briefly notice a volume which we have lately procured, entitled "A Selection of Papers and Prize Essays on Subjects connected with Insanity, read before the Society for improving the Condition of the Insane." The work is dedicated to the Earl of Shaftesbury, and contains ten papers or essays, on subjects more or less bearing on insanity and its treatment. Dr. Haslam, Sir A. Morison, Mr. Spencer T. Smyth, Mr. T. C. Morison, and Dr. Lockhart Robertson, being the names of the authors that are given of some of the papers. Dr. Haslam's contributions comprise three of the ten, viz.:—1. "On Restraint and Coercion," which is a very able one, and one which we would strongly recommend for perusal to all "total non-restrainers." 2. "An Attempt to institute the correct Discrimination between Crime and Insanity." 3. "On the Increase of Insanity, with an Endeavour to detect the causes of its Multiplication." The fourth in the list is "a remarkable case," by Sir A. Morison, that of a criminal lunatic in Bethlem Hospital, who regularly roasted the back of his head by stretching himself on a form he had placed close to a grate, containing at the time a large bright fire, and putting his head quite close to the bars, in which situation he was found by his attendant, who had temporarily left him. The lesions resulting from this roasting were, that the greater part of both parietal bones, together with part of the occipital bone and a large portion of the upper surface of the brain, were destroyed, ultimately causing death of course; but how long he lived, after sustaining so fearful an amount of injury, is not stated. It is remarked, that notwithstanding the above injuries, they did not produce any perceptible change in the mental condition of the patient.

We consider this a most interesting volume, and well deserving of being attentively studied.

Having now passed in review, as briefly as we could, the several publications, the titles of which are prefixed to this article, we may be permitted to say in conclusion, that it cannot but gladden the heart of the philanthropist to see what vast exertions are being made, what great things have been accomplished, and what still are in store for the relief and comfort of those who unhappily are suffering under one of the most lamentable ills that flesh is heir to, and how "judgment is tempered with mercy" towards them in the successful and earnest efforts made to watch over and to solace their affliction.

The Diseases of the Breast and their Treatment. By JOHN BIRKETT, F. R. C. S. E., Assistant Surgeon to Guy's Hospital. 8vo. pp. 264. (The Dissertation to which the Jacksonian Prize for 1848 was awarded by the Council of the College of Surgeons of England.) London: Longman. 1850.

A WORK from the pen of a prize essayist comes before the world under circumstances and conditions far different from those which attend the publication of an ordinary book; and this is especially true of those treatises on particular departments of medical science which have been called forth by the stimulus of a prize, and are ushered into the sphere of professional literature, stamped with the highest meed of approbation which the responsible agents of our colleges can bestow: bearing away the palm after what, we are bound to presume, has been a successful competition in an honourable contest. Yet, though no doubt immense advantages are enjoyed by a medical author who has the good fortune to make so favourable a *début*, though he comes before his brethren already judged, and his merits recognised, the duties of the critic demand that he should conduct his literary analysis with not less than ordinary care, and bring as keen and impartial powers of judgment to the performance of his task, as if no high authority had already passed sentence on the merits of the work he is about to examine. Perhaps on reflection it will even be conceded by many, that in weighing the merits of a work such as that before us, a more extensive and important field is thrown open, and that duties of a higher order devolve on him who has undertaken to wield the pen of criticism, which is so fully capable of effecting good, yet often is not wholly devoid of evil.

That the interests of our science may be advanced by the establishment of prizes as a stimulus to individual energy, we are fully of opinion; that by the same means a right direction may be given to the stream of intellectual labour, and that correct paths may be traced out for the successful pursuit of original investigation, with sufficient inducements to attract talent and genius, often as unsteady as brilliant, we also admit. Indeed it has often been a source of painful regret to us, that the munificent example offered by many of our brethren in England, and on the Continent, who have in so many departments established prizes with liberal endowments, has found so few followers amongst the members of the Irish School. But that the great aim of promoting the acquirement of scientific knowledge may be reached, it is not enough that prizes should be established, and intellectual contests engaged in, without a due regard being had to the selection of subjects, the actual condition of the special part of medical science to be cultivated, and the direction which should be given to investigation. In the words of Sir J. Herschell, very appositely quoted by our author in his preface, it will be necessary to "arouse the attention of observers, and at the same time give it that right direction, by pointing out *what ought to be observed*, without which all observation is lost labour."

On many occasions hitherto we have consulted with pleasure and profit the pages of a Jacksonian Prize Essayist, and in the present instance too we can say in all truth that we have gleaned instruction from the perusal of Mr. Birkett's work. If its author cannot lay claim to much originality, all must accord to him a pretty full acquaintance with the literature of his subject, a faculty of extensive research, and in general a clearness and accuracy of style. Few will be found to deny that in selecting the maladies of the breast as the subject for an essay, the Council of the College of Surgeons of England proposed a task far from easy of execution; and that it rarely falls to the lot of one who has not reached a considerable degree of seniority in his profession to have had opportunities of studying for himself or making original observations on all the forms of lesion to which this organ is liable. Perhaps on this very reflection may be based the strongest argument against holding out inducements for the compilation of *complete treatises* instead of *special monographs;* for however possible it may be with an adequate share of industry and diligence to pursue original investigation after a determinate plan, or to fill up outlines sketched by another hand, it is hardly to be anticipated that books written to order will have other than an ephemeral value,

or contribute largely to the store of medical knowledge. To be sure it may be urged that a signal benefit is conferred by having brought into a condensed and collected form the several authorities and references on a particular subject, a task which, though useful, scarcely becomes the ambition of the scientific surgeon or physician. We by no means wish it to be understood, however, that we consider the work of Mr. Birkett has had such a limited scope.

Our author commences with a description of *the configuration and the anatomy of the human mammary glands*, but it is to be regretted that he has not thought proper to enter more into detail in the seven pages which he has devoted to this subject. There are few points so much neglected by the anatomical student, in practising dissections, as the mammary gland; few, indeed, that he has so seldom an opportunity of examining in a full condition of development; and we fear that the hasty and imperfect outline of its anatomy given by our author will hardly have the effect of disseminating very clear or definite views of its structure.

Deducing from his anatomical observations that there are *three* periods in which the mammary glands present very different conditions, the following arrangement of the diseases of the breast is proposed by Mr. Birkett:—1. The diseases *before* puberty; 2. The diseases *during* the establishment of puberty; 3. The diseases *after* the establishment of puberty; *a.* during pregnancy, the puerperal period, and lactation; *b.* at any period or age after puberty.

Considering as we do, and as we think that we have elsewhere(*a*) proved, that the present condition of medicine does not allow of our framing classifications either generally or pathologically true, and believing that any one system of arranging diseases for the convenience of recording analogous facts, and registering observations, has but little value over another, we should not be at all disposed to canvass the merits of the one just proposed, but that we object on principle to the unnecessary cumbering of our literature with separate categories of disease, whose value is generally appreciated by their authors only. If the simple subdivision into malignant and non-malignant were adhered to, we believe it would not only answer all practical purposes exceedingly well, but the reader would be saved the trouble of finding the relative position of diseases on scales more widely different than those of Reaumur and Fahrenheit. To that of Mr. Birkett, however, we cannot hesitate to allow the great merit of simplicity.

(*a*) New Series, vol. ix. p. 168, February, 1850.

Under the head of abnormal conditions of the organs before puberty, will be found some brief remarks on affections of the mammary gland shortly after birth, accompanied by details of cases which are quoted at tedious length from various periodicals, a fault which, we may here observe, strongly characterizes the entire work, as the number of original cases, the result of the author's own observations, bears but an extremely small proportion to those cited from other sources. The great treatise of Sir A. Cooper has, no doubt, been consulted by him on many occasions, but we do not find that he has followed the maxims of that philosophical writer, who, in the preface to his great work on the breast, makes the following judicious observations, which we do not hesitate to bring forward, inasmuch as we have great reason to think that they are equally applicable to medical authors of the present day, and may be urged as forcibly now as when they were first penned.

"In performing this task," says Sir Astley, speaking of his work on the breast, "I have restricted myself to describing from my own preparations only; and if every author in our profession would adopt this plan, and merely write on what he is capable of demonstrating, preserving, and exhibiting to others, the medical world would not be overwhelmed with those crude opinions, theories, and conjectures, which, according to the present system of quoting all that has been written, are sure to compose the greater part of the works that issue from the press." The gift of originality has not been bestowed indiscriminately on all, yet we believe there are few who, by the exercise of moderate abilities, the enjoyment of even a limited sphere of observation, and a patient spirit of research, cannot add important facts to the records of medicine.

Under the heads "Amazia," and "Pleiomazia," the most remarkable recorded cases of deficiency and excess in the number of the breasts are cited. The well-known case of quadruple mammæ by Dr. Robert Lee, and that by Dr. Shannon of Dublin, are given in full(*a*).

In treating of the subject of inflammation of the breasts, we are again favoured with divisions and subdivisions, well-defined, no doubt, in theory, but hardly appreciable in practice. The author classes these affections as follows:—A. Inflammation and its results in the cutis and subcutaneous tissues, covering, 1, the nipple; 2, the areola; 3, the gland itself.—B. Inflammation, and its results in the tissues behind the gland.—C. Inflammation, and its results in the tissues within the investing

(*a*) The former taken from Sir A. Cooper, the latter from our Journal for February, 1848.

fibro-cellular envelope, or fascia of the gland. 1. Of the lobes or gland tissue; 2, of the uniting tissue.

The pathology and treatment of these several affections are next described in a similar order, with much detail, and copious illustration by cases, the selection of which must have required an indefatigable patience in research, some of them having been chronicled in the first years of the present century, and no small number being taken from foreign periodicals, while not more than four have actually occurred in the author's own practice.

Perhaps the best section in the entire work is that which immediately follows, and is devoted to the consideration of "diseases depending upon the development of cysts and intra-cystic growths." Under this head our author includes several forms of disease described by Sir Charles Bell as *carcinoma mammæ hydatides;* by Sir Astley Cooper, hydatid disease of the breast; and by Sir B. Brodie, sero-cystic disease: while the terms unilocular and multilocular cysts are employed by the French writers to designate the same affection. The following arrangement is proposed by Mr. Birkett:

I. Cysts depending upon dilatation and a morbid condition of the lactiferous ducts or acini.

II. Cysts produced by a peculiar action in the fibro-cellular envelope of the gland tissue, and in consequence of a morbid state of the function of nutrition.

The former he considers may be developed in the several situations here named:

1. Near the nipple, *sub-areolar.*

2. In the substance of the gland, *intra-glandular.*

3. On the posterior surface of the gland, *sub-glandular.* This last being, in the opinion of the author, the simplest form in which these cysts exist.

Mr. Birkett has developed his views of the formation of these structures at considerable length. In reference to the first class he observes:

"The size varies from an almost imperceptible point to that of a filbert, but, I believe, is rarely larger. The colour, which depends upon that of the contents, varies from yellow, pale red, or brown, until it becomes almost black, or of a dirty green tint. They possess an external investment of the fibro-cellular tissue, and the lining membrane consists of a very beautiful coherent epithelium. Each epithelial cell is oval, contains a nucleus, and is somewhat granular in texture. Thus this epithelium closely resembles that of the ducts.

"The contents of these cysts are of a mucous nature, of a pale,

yellow, reddish, or dull green tint. They exhibit a granular basis, fat globules, milk globules, and colostrum corpuscles, with epithelium. The colour probably depends upon the decomposition, or the presence of hæmatin.

"Therefore I believe this fact is established,—that cysts may exist in the mammary gland having contents identical with those of the common milk ducts.

"These small isolated cysts probably arise in consequence of obstruction in the caliber of the minute ducts, and to this cause must be attributed the formation of larger cysts of this class, which occur either in the substance of the gland or beneath the areola."

A diagram is subjoined, by means of which the author's opinion as to the mode of production of the cysts is explained. A duct is represented in which an obstruction has taken place at a particular point; as secretion goes on in this tube its parietes become dilated, causing detached enlargements, or a varicose condition, and, with the progress of the disease, the portions of the duct between the enlargements contract. Finally, he considers that all trace of the duct is lost, and that small cysts are formed in the condensed cellular tissue.

He next passes to the description of a disease of the larger ducts occurring near the nipple, "presenting a cystiform character." The morbid action to which they are due he considers to take place as follows:

"In the first place an excess of secretion takes place in the duct, which, from some cause or other—malformation of the nipple, or obstruction of the duct by pressure—does not flow away spontaneously, although perhaps it may be made to ooze out. The fluid becoming absorbed, the more solid material, the epithelium, remains behind, leaving a coherent mass of more or less solidity. This body may cause irritation, an excited action is induced, blastema is effused, and nucleated cells, which attain a degree of fibrillation, are formed: hence the appearance of organized growths found in the ducts."

As the result of his observations the author draws up the following conclusions:

"1. That the lactiferous ducts are liable to dilatations resembling cysts; that this morbid condition simulates more important diseases: hence, this suspicion being excited, the excision of the tumour has been resorted to.

"2. There is no evidence to prove, from minute examination, that the growth within the ducts enjoys any characters in common with either the cysto-sarcomatous or carcinomatous new formations; and,

"3. That this morbid condition belongs to the class of the non-contaminating diseases.

"I am fully aware that, in making the above statements, I am directly at variance with the opinions expressed by Sir Benjamin Brodie, at page 148 of his Lectures illustrative of various Subjects in Pathology and Surgery. And, with all deference to his high talents and acute observation, I must observe that the facts above stated had reference to those preparations only which I have myself examined with great minuteness, but which correspond in outward appearance, so far as I have been able to compare them, with that preparation in the museum of St. George's Hospital upon which his observations are founded. A minute examination would determine the question.

"Another observation, before concluding my remarks upon this class of cystiform affections, relates to their co-existence with almost all the forms of the other diseases to which the breast is liable. Thus the small cysts first spoken of are very commonly found in a portion of the gland tissue removed with a tubercle of carcinoma fibrosum or medullare."

In the foregoing remarks the author appears to claim for himself the merit of originality; but though we have examined with care the pages of Sir B. Brodie's work devoted to the consideration of "sero-cystic tumours," we have been at a loss to find the points at issue. Mr. Birkett has, no doubt, given a very full and detailed account of the disease, classified varieties, and enlarged on morbid appearances and general pathology, but we must say that the general account given by Sir Benjamin Brodie resembles accurately enough that of our author, in proof whereof we cite the following passage from the "Lectures on Pathology and Surgery:"

"Having explained to you these facts in detail, with a view to impress the subject more completely on your minds, I shall endeavour to trace, in a few words, the pathological history which they seem to establish, and which not only as a matter of science, but in a practical point of view, it is important for you to understand. It appears then to be as follows:

"*First.* A greater or less number of membranous cysts are generated in the breast, containing serum. The latter is at first of a light yellow colour, and transparent, but afterwards becomes of a darker colour and opaque. There is reason to believe that these cysts are formed by a dilatation of portions of some of the lactiferous tubes.

"*Secondly.* Morbid growths or excrescences are generated from the inner surface of one or more of these cysts, projecting into their cavities. . . . They are covered by a thin delicate membrane, which is reflected over them from the inner surface of the cysts; but whether they are originally formed between two layers of the membrane of the cysts, or whether they are

at first mere deposits of fibrine or albumen on the inner surface of the cyst, a thin membrane being formed on their surface afterwards, remains to be determined by future observations.

* * * * * *

" *Fourthly.* Under certain circumstances the cysts become completely filled up by the morbid growths, so that their cavities are obliterated, the tumour being thus converted into a solid mass, in which, however, the remains of the cysts are perceptible; and this is the prelude to a still further change, in which the greater part of the cysts have wholly disappeared, a solid mass of an indistinctly laminated texture occupying their place"(*a*).

Cysts containing Fluids as well as Solid Growths.—The intra-cystic tumours are in the opinion of our author always more or less in connexion with gland tissue, and are invested by a reflection of epithelium from the cyst wall. From the result of his microscopic observations, he considers them as being constituted chiefly of an imperfectly developed gland tissue, and arrives at the conclusion, " that this tissue presents no resemblance to that of the carcinomata, and that there exists no evidence to prove that it has the power of contaminating other tissues, or of being generated in any other organ of the body." A statement, the latter part of which is, we consider, enunciated with too much boldness, as almost all such exclusive pathological views (and they were rather numerous a short time since) are, in our opinion, destined to be overturned at no distant period, when investigations of morbid products shall be conducted on a sufficiently extensive scale, and with the requisite degree of care and accuracy. The entire of this section, devoted to the " pathology of cysts," " diseases depending upon cysts," and the several subdivisions of the subject, may be consulted with interest and advantage. It will be found amply illustrated with cases, no pains in making research have been spared, and the only thing to be regretted is the paucity of original observations.

Passing over the sections devoted to " hypertrophy of the mamma," and " lobular imperfect hypertrophy," we come to the " painful tumour of the breast," in reference to which the author observes:

" Of the painful affections of the mammary gland three distinct kinds must be recognised, since, in a practical point of view, an accurate diagnosis is a matter of great importance.

(*a*) Lectures on Pathology and Surgery, by Sir B. Brodie, p. 148.

"1. *Mazodynia*, or a painful affection of the organ generally, to the consideration of which a separate chapter will be devoted.

"2. Lobular chronic induration of the normal tissue.

"3. Lobular imperfect hypertrophy; a new growth. Both these, 2 and 3, being attended with intense pain, either paroxysmal, continued, or in consequence of and after manipulation."

At page 164 will be found a brief but satisfactory account of "mazodynia," which is considered separately and under two classes.

1. *Without induration*, but with or without temporary enlargement.

2. *With* general, or partial *induration*, and often, but not always, temporary.

The *age*, *social condition*, *sensations*, and other circumstances to be observed in patients the subjects of this affection, are noticed with care and accuracy, and, as may be remarked of all the other sections of this work, with consideable attention to order. Yet though the *morbid anatomy* be excellent, the treatment faultless, it strikes us that something is wanted in these fluent descriptions, which we have no hesitation in saying is that power of drawing graphic and striking contrasts, only to be learned by close clinical observation, in other words, the facility of writing rules for diagnosis. Has this aught to do with the author's substitution of cited for original cases, the latter of which appear to have been so scanty with him?

Without noticing the sections devoted to "atrophy of the breasts," "hydrops saccatus mammæ"(*a*) (the latter condensed from Oppenheim's Zeitschrift), "diseases of the nipple and areola," &c., we pass at once to that on the "diseases depending upon carcinomatous degeneration of the mammary glands." The great importance of this subject, and the able manner in which it has been repeatedly treated, with the new interest it has derived of late from the attention bestowed on *pathological histology*, led us to hope for a chapter displaying more than ordinary ability, erudition, and research, from the *systematic* pen of a prize essayist; we should even be disposed to receive with gratitude a tolerably complete resumè of the present state of medical knowledge on this engrossing topic, if the author's sphere of investigation had not thrown in his way much opportunity for original observation. But we regret to say that our anticipations have not been realized, and, with the exception

(*a*) The medical history of this affection appears to be confined to the cases cited by the author, given from Oppenheim's Zeitschrift, in Canstatt's Jahresbericht, 1846, bd. iv., s. 270.

of some few statistical results, we cannot point to much in this entire section which deserves to be considered as matter added to the stock of our knowledge.

The following are the modes in which the author considers carcinoma of the breast may be developed:

"1. Lobular carcinoma; attached to or involving only one lobe.
"2. Intra-glandular carcinoma, infiltrating the entire gland.
"3. Encysted carcinoma, generally *carcinoma medullare.*
"4. Carcinoma of the nipple.
"5. Carcinoma commencing in the skin, either of the nipple areola, or over the gland."

After a general description of the progress of a cancerous tumour, the question of "age" is considered. In reference to this point the author has constructed a table showing the results obtained by the comparison of 147 cases, ranging in age from eight to ninety-three years. This subject has been treated before by M. Lebert and Dr. Lever, with the latter of whom Mr. Birkett coincides. Of 147 cases which he analyzed by dividing a period of 100 years into decades, 51 are found in the fifth, or between the ages of 40 and 50, one occurring in the first and one in the last decade. The discrepancy between these results and those arrived at by M. Lebert is explained in the following manner:

"It appears by a table drawn up by M. Lebert, which I presume refers to cancer occurring in any part of the body, that in 91 cases the largest number of instances were observed between the ages of fifty and sixty, namely, 29; and between forty and fifty, 20 cases.—Abhandlungen, &c. s. 336.
"From an analysis of 120 cases of cancer of the uterus, by Dr. Lever, it 'appears that the period of life most obnoxious to this disease is from the fortieth to the fiftieth year.'—Med. Chir. Trans. xxii. 269."

The development of the disease, its duration and treatment, are considered in a very clear and lucid manner; there is nothing, however, to arrest the attention of one acquainted with the standard authorities on the subject; and we pass to the "Anatomy of Carcinoma," page 242. The author has, in a previous page, committed himself to the following very strong opinions on the "identity and identification of carcinoma":

"As regards the identification of carcinoma, or of a tumour formed of a tissue in every respect identical with that surrounding the form of ulceration termed 'cancer,' it does not appear to me that any doubt need exist upon the point.
"The minute anatomy of carcinoma is so distinct and peculiar,

so totally different in almost every respect from that of any other tissue in the body, and the elements of which this tissue is composed are so characteristic, that the identification of a growth of this nature no longer remains a matter of uncertainty or of doubt."

Our powers of diagnosis from the study of histological elements are, no doubt, much less acute than those of the author, and we do not hesitate to confess that we have, in no small number of cases, been perplexed when examining specimens whose *general* history admitted of doubt as to their malignancy, and we cannot by any means subscribe to the opinion that the identification of carcinomatous growths is a matter of such very great facility. Many on whose judgment we place reliance in such matters have shared with us similar doubts. If we turn to the author's own description it will be found that the characteristics he relied on are not so pathognomonic as to exclude the possibility of error:

"The appearances observed in carcinomatous growths in the mamma are so variable, depending upon so many accidental circumstances, that it really scarcely amounts to exaggeration to say that we rarely meet with two precisely alike.

"We now pass to the minute anatomy.

"The essential elements of carcinoma are nucleated globules and a fibre. In plate X. fig. 1, *a*, is represented a lobular carcinoma. In fig. 2, a portion of one of the septa is magnified, and the minute collections of nucleated bodies are seen between the elements of the uniting or areolar tissue. A very thin section of the tumour was made, and in figure 2 the minute deposits of nucleated globules were seen between the elements of the fibre tissue, and extending too between the lobes of the adipose tissue. This is the mode in which the disease extends to the cutis.

"This, then, I believe to be the minute structure of *carcinoma fibrosum*, namely:

"The development of nucleated bodies between the elements (that is, between the fibres) of the uniting or areolar tissue.

"Now, in proportion as the fibre tissue predominates or is deficient, so is the new growth firm or soft.

"In tumours of this class two kinds are met with: one in which the minute bodies, 'nuclei,' predominate; the other in which the 'nucleated globules or cells' seem to constitute the chief material between the fibres.

"The *carcinoma fibrosum* presents a large quantity of fibre tissue, with a preponderance of nucleated globules.

"The *carcinoma medullare* presents a very small quantity of fibre tissue, with a preponderance of the nuclei."

Under the head of "Causes of Death of Individuals labouring under Carcinoma Mammæ," will be found an analysis of

thirty-seven *post mortem* examinations, by which the several organs and parts of the body attacked in different cases are shown. A question of extreme interest is involved in this inquiry, viz., as to *whether a given organ being cancerous, it be a matter of indifference what part will next be the seat of a similar deposit.* Some confused notion appears to be afloat on this subject, and observations are not wanted to prove that, in many cases, cancerous deposit has followed a *certain track* through the system. We have, however, very lately examined a case where a very *excentric deposit* of malignant disease took place. The glands of the groin being primarily affected, the disease next appeared in the form of an enormous tumour growing from the mesentery, the lumbar glands being untouched; and, lastly, the right ventricle of the heart presented also a small cancerous growth.

We regret much that a sense of duty has compelled us to withhold any large share of approbation from the labours of an author whom others have pronounced unequalled in a prize competition; and we take leave of Mr. Birkett's work, with a sincere hope that the splendid field of observation at his command will ere long be more sedulously and successfully cultivated, to his own greater honour, and the advantage of his profession.

Surgical Anatomy. By Joseph Maclise, Surgeon. Fasciculus V. and VII. Folio. London: John Churchill. 1850.

The application of art to the illustration of subjects connected with medical science has hitherto been attended with such expense, whenever faithfulness of delineation or beauty of execution were required, as to deprive the majority of students of any assistance to be derived, in the study of general or surgical anatomy, from the examination of good drawings; and it was only to a favoured few that the great works of Lizars, Quain, &c., were at all available. It was, then, with no small degree of pleasure that we witnessed the issue of Mr. Maclise's Surgical Anatomy, which so highly deserves the notice of professional men, whether students or practitioners, from the artistic skill displayed in the drawings, their accuracy of detail, and the very low price at which they have been published. To the enterprise of Mr. Churchill we are already indebted for the beautifully illustrated works of Mr. Dalrymple and Mr. Wilson, both of which we have on previous occasions noticed favourably; and in the present instance the same laudable

spirit presents us with an anatomical work of superior merit, at a cost which will allow of its introduction into general use amongst students, thus affording them invaluable aid in the prosecution of their dissections.

Fasciculus V. of the Surgical Anatomy, devoted to the subject of "Hernia," contains four lithographic plates, giving, in all, eleven different views of well-chosen dissections of the inguino-femoral region, accompanied by a commentary and general description, agreeing in most particulars with that of the most distinguished writers on this important subject. The first two plates present us with dissections of the inguinal and femoral regions in their normal condition, exhibiting the several layers of parts with great distinctness and correctness of anatomical detail. To any one acquainted with the practical difficulties of demonstrating on the subject in any particular instance the anatomy of this important region, and to those who wish to derive their knowledge of it from actual dissection, and not from the fluent descriptions of text-books, we can confidently recommend a careful study of these beautiful drawings, which we think eminently calculated to convey to the dissector a combined view of all that he is obliged to learn by separate detail and the most skilful use of the scalpel. We would not wish to be understood, however, as advocating the abandonment of the knife, for we feel thoroughly convinced that he has no claims to be called an anatomist whose ideas are obtained solely from text-books or plates, however accurate, without the constant practice of careful dissection, and the repeated manipulation of all important parts.

Much attention has been bestowed by Mr. Maclise on the anatomy of the inguinal and femoral rings, and the relative position which the vessels hold to them; several views, as well on the peritoneal as on the superficial aspect, being presented, while the connexions of the fasciæ and their general disposition are also well exhibited. Figures 1 and 2 show with remarkable distinctness the arrangement of the vessels and nerves under Poupart's ligament, and the formation of the sheath of the femoral artery, as also the several crural septa. The third and fourth plates present us with dissections of several varieties of hernia, and are well worthy the attention of the surgeon.

Opportunities of dissecting the parts engaged in hernia are so rarely offered to those pursuing anatomical studies, that many must be content to gain their knowledge of this disease from written descriptions and the assistance of plates; hence the additional value of well-executed and easily available drawings, such as those furnished us by Mr. Maclise, which

convey a vivid and intelligible idea of that which indeed can be only imperfectly understood from the most elaborate descriptions. It is much to be regretted that all other departments of surgical and general pathology have not been illustrated in a manner equally excellent and equally available; for, unhappily, the advantages to be derived from the study of such great standard works as those of Cruveilhier and Carswell are limited to a very few, in consequence of the expensive manner in which they have been issued. It would, indeed, be a fortunate thing for pathological science if it could enlist the pencil and artistic skill of Mr. Maclise. We would even venture to suggest the subject to him as one in every way worthy to engage his talents.

The third plate presents us with views of the oblique or external, and the direct or internal inguinal herniæ. The distribution of the principal vessels in connexion with them is well shown; while in the fourth plate, and the commentary to it, attention is drawn to the principal elements of diagnosis between these two forms of the disease; the taxis, the seat of stricture, and the operation being also briefly considered.

Turning to Fasciculus VI. we find the first plate occupied with "Demonstrations of the Nature of Congenital and Infantile Inguinal Hernia, and of Hydrocele," presenting us with nine views of the anatomy of the parts severally engaged in these affections. We venture to say that a single glance at the Figures 7, 8, and 9 will convey to the student more clear and defined notions of the respective anatomical peculiarities of congenital, infantile, and oblique inguinal hernia, than can be gained from the most elaborate written or verbal descriptions. Plate 22, the second of this fasciculus, exhibits in fifteen different figures the anatomy of the parts concerned in inguinal hernia, both internal and external, with all the possible varieties of both; while in Plates 23 and 24 will be found admirable delineations of femoral hernia, the commentary on which is written in a clear and lucid style, including a full description of the seat of stricture, the diagnosis, the taxis, and the operation. Altogether this work shows internal evidence of the high anatomical and surgical attainments, as well as artistic skill of the author, whose labours in the application of the art of design to the purposes of scientific illustration have added new lustre to a name which his brother has already made immortal in the annals of Irish art. It is with much pleasure, therefore, that we recommend to our readers the Surgical Anatomy of Mr. Maclise, which we consider a most valuable addition to the list of standard anatomical works.

Treatise on Diseases of the Larynx and Trachea, embracing the different Forms of Laryngitis, Hay Fever, and Laryngismus Stridulus. By JOHN HASTINGS, M. D., Physician to the Dispensary for Consumption and Diseases of the Chest. London: Longman. 1850. 8vo. pp. 160.

A Practical Synopsis of Diseases of the Chest and Air Passages, with a Review of the several Climates recommended in these Affections. By JAMES BRIGHT, M. D. London: Churchill. 1850. 12mo. pp. 271.

The Diagnosis, Pathology, and Treatment of Diseases of the Chest. By W. W. GERHARD, M. D., Lecturer on Clinical Medicine to the University of Pennsylvania, one of the Physicians to the Pennsylvania Hospital, &c. Third edition, Philadelphia: Barrington and Haswell. 1850. 8vo. pp. 351.

MONOGRAPHS abound more on diseases of the respiratory organs than on those of any other portion of the body; perfection and simplicity in their diagnosis daily becoming more facile, render them an interesting study in a science still admittedly too profound in its entirety for human genius; moreover, since the discovery of auscultation, their investigation has been attended with the happiest results as regards treatment. These facts, when taken in connexion with their number, their great prevalence, and their importance to life, sufficiently account for the numerous treatises on this class of affections in which the medical literature of the present century is so rich. Nor are we at all disposed to find fault with this, or with the almost daily additions to the number which our list of new books records; no disease can be too much or too minutely investigated; yet we often feel disposed to complain when we find authors rushing into print, and founding a book on some little novelty they fancy that they have discovered, or, worse still, reiterating facts not only previously described but already well known.

Of late years especial attention has been bestowed on the treatment of those diseases which affect the larynx and the trachea in the adult, and which give rise to hoarseness or total loss of voice. Of the many physicians who have written on these affections, Dr. Horace Green of New York, whose work we reviewed in the fourth volume of our present series(*a*),

(*a*) [In the Number of the Edinburgh Monthly Journal for July last a paper was published by Dr. John Scott, on the topical treatment of diseases of the larynx, in which he states, at page 16, that when his paper was written, "the

must, we think, take the foremost rank; for although he cannot lay claim to having originated the practice, yet he revived its use, and brought it so forcibly under the notice of the profession, sustaining his views by facts derived from his individual experience, that to him must fairly be ascribed the merit of placing at our command a most valuable therapeutic agent.

It is chiefly with the view of illustrating the effects of the direct application of a solution of nitrate of silver to the lining membrane of the larynx and trachea, in the treatment of the diseases to which they are liable, that Dr. Hastings has published the volume now before us; and his experience is decidedly corroborative of the statements put forth by Dr. Green. His observations illustrate the curative effects of this plan of treatment in acute laryngitis, chronic laryngitis, chronic laryngitis accompanied by hemorrhage, chronic laryngitis occasioning asthma, follicular laryngitis, tubercular laryngitis, hay fever, syphilitic laryngitis, laryngismus stridulus, and phthisis. He generally uses a solution containing half a drachm of the salt to the ounce of water, and he applies it with a piece of sponge attached to a whalebone rod, in the manner recommended by Dr. Green.

Dr. Hastings employs also a solution of the bicyanuret of mercury, which he prefers to the nitrate of silver in syphilitic affections of the larynx and in laryngismus stridulus; using a saturated solution in the latter disease, and one containing half a drachm to the ounce of water in the former. We must confess, however, that, notwithstanding Dr. Hastings' commendations of this application, we would not venture to use so active a poison in this manner, more especially in children, for in their struggles a quantity sufficient to occasion death might readily get into the stomach.

In our original communication department in this Number Dr. Watson of Glasgow has published the results of his experience of the topical treatment of laryngeal disease, and has directed especial attention to the benefits derived from it in phthisis. Dr. Hastings gives an equally favourable account, concluding that it is "productive of much good in tubercular laryngitis, and a valuable adjunct in the treatment of phthisis."

The author has prefixed to his observations on their treatment a concise view of the symptoms, causes, and diagnosis of

only notice of the practice was contained in the last volume of Dr. Forbes' Review." Authors should not make such sweeping assertions without being quite certain of their correctness, for, with very little research, Dr. Scott might have ascertained that we had reviewed the practice at length in the year 1847.—Ed.]

the diseases above enumerated, and has thus produced an interesting and practical little volume.

In the small work published by Dr. James Bright, the author proposes to submit to his professional brethren the results of his experience, acquired "from several years' careful study in investigating the diseases of the chest, and the best means for their alleviation and cure." Where he has gained his experience, or in what hospitals he has carried on his investigations, he does not state, for in the title-page he simply styles himself "James Bright, M. D." We remark this as, after perusing his book, we felt anxious to learn his pretensions for giving to the world so meagre a compilation as the volume before us.

It is divided into three parts; the first of which contains an account of the anatomy of the chest, the physiology of respiration, and the methods of exploring the physical conditions of the chest; the second is devoted to a consideration of the affections of the air passages and the diseases of the lungs; and in the third, the several climates usually resorted to and recommended in diseases of the lungs and air passages are described.

We were, probably, wrong when we said that Dr. Bright's book is a *compilation*, for, whether we consider the matter or the manner, the "succinct account," as he terms it, of the anatomy of the respiratory organs is one of the most *original* pieces of composition that we remember to have read in English medical literature. So original do we think it that we cannot resist the temptation of extracting a few passages for the benefit of our readers, begging them to remember that this anatomical portion has been prefixed to the book, "in order to enhance its utility in a *practical* point of view:"

"The chest is separated from the head by the neck, and from the abdomen by the diaphragm. It is composed of thirty-seven bones, namely, twelve dorsal vertebræ, twenty-four ribs, and the breast-bone or sternum.

"The posterior wall of the chest, concave from above downwards, is formed by the bodies of the twelve dorsal vertebræ and the posterior ends of the ribs. The latter curve a little backwards and then outwards from the spine, so that the bodies of the vertebræ are inclined forwards into the thoracic cavity.

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"The organs of respiration are the lungs, two in number, placed in the cavity of the thorax. They consist essentially of membranes, canals, and vesicles filled with air, which are surrounded with a dense network derived from the pulmonary vessels; and also of a tubular apparatus for the ingress and egress of air, commencing

with the trachea. Air is likewise conveyed through the pharynx and larynx, hence these may all be considered as accessory organs of respiration. In the same category must be included the pleuræ, or investing membranes of the lungs; and the thorax, for by its dilitation [*sic*] inspiration, and by its contraction expiration is mainly effected.

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"The heart is an irregular conical-shaped hollow muscle, inclosed in a serous pouch, called pericardium, situate in the front part of the left side of the chest, partly pendent, partly resting on the diaphragm. It is composed of two symmetrical halves (two hearts, as it were, in juxta-position), of which the right receives the venous blood from the system and propels it to the lungs; the left, on the other hand, receives the arterial blood from the lungs, and, through the aorta, distributes it over the whole body. Each of these halves is divided by a partition into two cavities, namely, an auricle and a ventricle, which are connected by an opening, but not in direct communication with the cavities of the other half. The heart, which thus comprises four cavities, is invested externally by a serous membrane, a continuation of the pericardium, internally by the general arterial lining membrane.

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"The four cavities contained in the heart are, in all probability, during life, of one uniform size; otherwise an unequal amount of blood would be transmitted through them, and necessarily disturb the regularity of the circulation. In the dead body the right half of the heart seems more roomy than the left.

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"The pericardium is a membranous fibro-serous shut sac, in which the heart is inserted, like the head in a night-cap."

Such is a specimen of the style in which Dr. Bright conveys information in what purports to be a practical monograph on, probably, the most important range of diseases which the physician has to study.

Let us, however, turn to the second part of the work, in which the diseases themselves are treated of, and see if there are any redeeming qualities there which might in some degree account for his appearance as an author. It includes an account of acute and chronic catarrh, acute and chronic bronchitis, bronchial polypi, acute and chronic laryngitis, tracheitis, laryngismus stridulus, pertussis, pneumonia, gangrene of the lungs, pleuritis, pneumo-thorax, pulmonary œdema, hemoptysis, emphysema, melanosis of the lungs, influenza, hay asthma, and phthisis pulmonalis! The whole of these are *disposed of*—the most appropriate term we can find—in 128 12mo. pages, of which we can at least say that they are *easily* read, inasmuch

as the type is large, the lines wide asunder, and each page has a goodly margin. So struck were we with the volume as a specimen of book-making that we took the trouble of analyzing it typographically, and we find that one page of the part of our Journal which the reader is now perusing, contains as many words as three pages of Dr. Bright's volume. Thus it may at all events be regarded as a *reading-made-easy* of the diseases of the respiratory organs, the entire subject being condensed into about forty moderately filled pages of an octavo volume! If, however, his *words* are few, his *practice* is heroic; of this his method of treating influenza is a good example:

"The treatment of influenza may be very briefly stated: on the first invasion, the patient should be confined to his bed or chamber, and have a dose of calomel, with colocynth, and James' powder, followed by a cathartic draught; a mixture of the acetate of ammonia, containing nitre, squill, and antimony, should be taken every four or six hours; a large mustard poultice placed over the chest will relieve the oppressed breathing, and promote secretion from the mucous membrane. Sometimes this treatment may be preceded by an emetic, which is useful in several ways: it empties the stomach, emulges the biliary vessels, relieves the chest, and determines to the skin. The surface of the body should be kept warm, and diaphoresis encouraged by partaking frequently and plentifully of diluent drinks. Blood-letting should be most carefully shunned, on account of the great debility and prostration always present. There may be necessity for capillary bleeding, however, if the disease be complicated with inflammatory and local congestion; the diet should be spare, light broths and farinaceous puddings, but afterwards a more liberal aliment may be allowed."

But we will not weary our readers' patience with any further notice of Dr. Bright's book, which we would have passed by in the silence it merits, were we not apprehensive that the name of the author, from being similar to that of one of the first physicians of our age, might induce some of our readers to obtain it.

Dr. Gerhard's volume has for some years been a favourite text-book with our American brethren, as is sufficiently evidenced by the fact of its having reached a third edition. It contains a good practical resumé of the diseases of the respiratory organs and of the heart, although more adapted, from its elementary character, for the student than for the practitioner. It is so rarely, however, that we meet with an original work on medicine from the other side of the Atlantic, that we feel much gratification in calling the attention of our readers to

one which may be fairly classed with those of the most celebrated European physicians.

This want of originality in the medical literature of the United States cannot be ascribed to any deficiency in the literary talent of the medical profession there; for in it there have been and are many whose names are well known for their skill, their energy, and their talents; but on whatever cause it depends, the evil has grown to such a magnitude,—we refer more especially to the reprinting of the works of British physicians and surgeons,—that it has at length awakened their own attention to the injurious influence it is producing on their national character. In the first volume of the Transactions of the American Medical Association, this feature in their publications is thus commented on in the Report of the Committee on Medical Literature: "The fairest fruits of British genius and research are shaken into the lap of the American student; and the great danger seems to be, that, in place of the genuine culture of our own fields, the creative energy of the country shall manifest itself in generating a race of *curculios* to revel in voracious indolence upon the products of a foreign soil." We rejoice that the matter has at length attracted such notice, and as the result, we expect that, ere long, original publications, and not reprints, will form the bulk of American medical literature.

PART III.

REPORTS, RETROSPECTS, AND SCIENTIFIC INTELLIGENCE.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.

TENTH SESSION.—1849–50.

Acute Inflammation of the Spinal Cord.—Dr. M'Dowel brought forward the following case of acute inflammation, with softening of the spinal cord: Matthew Tracy, aged 35, an in-door servant, was admitted into the Whitworth Hospital on Friday, the 9th of December, 1849. It appeared that two days before his admission he found himself unable to discharge the contents of his bladder, nor could he assign any cause for this unusual circumstance. After several hours, the assistance of Dr. Adams, of Kingstown, was procured, who passed a catheter, and drew off a considerable quantity of urine. The patient stated that about ten days before the occurrence of retention of urine he had experienced shiverings and pains in the back and loins, and through his limbs generally; these febrile symptoms, which were attended with a sense of lassitude, and with disturbed sleep and frightful dreams, did not, however, prevent him from following his usual daily occupations. On the following day (Saturday) the bladder was still in a state of paralysis, and, by the advice of his medical attendant, he was conveyed in a car to the Whitworth Hospital. Whilst on the way he vomited, and had a discharge from his bowels, of which he was unconscious, but he was able to walk to his ward with some slight assistance. A catheter was passed by the pupil in attendance, and the bladder emptied. On the day after his admission, when first seen by Dr. M'Dowel, his condition was as follows:—The bladder was greatly distended, but this, which is so generally a source of great distress, did not appear to cause the patient much annoyance, nor did the introduction of a catheter seem to give him any pain. It was next ascertained that during the short time that had elapsed since his admission, complete paralysis of motion of the lower extremities had

occurred; their sensibility, likewise, was impaired, and to this extent, that when one of his legs was touched he was conscious of it, but was unable to tell on which limb the hand was placed. The lower extremities lay powerless and extended, their muscles were very flaccid, and, to the patient's own sensations, the limbs felt as if they were "asleep." The pulse was 90, and the face had a peculiar collapsed and shrunken appearance, which never left it subsequently. On the following day (Tuesday) the upper extremities had likewise become paralysed, the patient retaining, however, some slight power over the right hand. On the next day (Wednesday), the paralysis of the upper and lower extremities, both as regarded sensibility and voluntary motion, might be deemed complete; there was diminished sensibility of the cutaneous surface as high as the clavicles. Some amount of dyspnœa was observed on this day; the respiration was of a sighing character, and principally carried on by the agency of the diaphragm, assisted by the sterno-mastoid and scaleni muscles. Inspiration was laboured, and the chest no longer seemed to expand. The voice also had become almost inaudible, and it was evident that the powers of life were rapidly failing. On the following day (Thursday) there was profuse sweating, and the dyspnœa was still more distressing than before. The respiration was 30 in the minute, and the pulse 96; the urine was ammoniacal, and deposited large quantities of ropy mucus. From this period up to the time of his death the patient's posture in bed was peculiar. By his own desire he was placed in a sitting position, propped up on all sides by pillows; when thus placed, he said he breathed most easily, and on one occasion, when he was induced to allow himself to be placed in the horizontal posture, dyspnœa of a most alarming kind came on, which for a moment seemed to threaten the patient's existence. The voice, at this period of his illness, was completely extinct. On this day, and the next following, there was slight raving, but, with this exception, the mental faculties were unimpaired throughout, his intelligence was perfect, and his memory clear. From the first the pupils were contracted.

It was observed that no involuntary starting of the muscles of the paralysed limbs ever occurred, nor could such be excited by artificial stimulation of the surface; and even the introduction of the catheter failed to produce any manifestation of muscular contractility in the muscles of the lower extremities.

No alteration occurred in the symptoms which have been detailed; the patient sank rapidly; on Friday night the urine flowed away from the bladder, instead of being retained, as had been the case up to this time; and finally death took place, unpreceded by any struggle or convulsion, on the afternoon of Saturday (15th), being the ninth day from that on which retention of urine first suddenly occurred.

Post Mortem Appearances.—Brain.—The brain was rather more vascular than usual, and the sinuses of the head were turgid; but in all other particulars the encephalon was healthy.

Spinal Cord.—There were no appearances of disease external to the dura mater; but on cutting into the "theca" (which was first done at its lower part), an *excessive quantity* of turbid serum, of a wheyish colour, and mixed with flakes of lymph, made its escape. The outer surface of the cord, invested by its pia mater, appeared, for the most part, healthy; but for about two inches of its extent, between the dorsal and lumbar regions, it was of a yellowish colour and flattened appearance, and had lost to the touch the firm feel which is essential to this organ as a part of its natural condition. The veins of the cord were also much distended and tortuous. On making a vertical section into the interior, the spinal cord, from the centre of its cervical portion to its termination below, was found to be softened, pulpy in its appearance, and changed to a soft, creamy consistence. Numerous spots of extravasated blood were scattered throughout the softened nervous mass, presenting an appearance similar to that which, when observed in the brain, is above all others indicative of inflammatory softening. The bladder presented all the appearances of acute inflammation.

Dr. M'Dowel then made the following remarks upon the foregoing case: It is unnecessary to occupy the time of the Society in proving how analogous are the symptoms of the case just detailed to those which are met with as the result of fractures of the spine in the cervical region, attended with an interruption of the continuity of the spinal cord. The symptoms that were present, and by which we were led to regard this case as one of spinal myelitis, may be thus grouped:—1st. Complete loss of the power of voluntary motion in the extremities, retention of urine, and paralysis of the sphincters of the rectum. 2nd. Loss of passive contractility (tonicity) in the voluntary muscles, and the abolition of their reflex or involuntary movements. This circumstance is interesting, inasmuch as it furnishes a proof of what is very generally recognised, viz., that the spinal cord is the seat or centre of these involuntary motions. 3rd. Loss of tactile sensibility, to an extent corresponding to that of the paralysis of motion. 4th. Dyspnœa, which was greatest in the horizontal position. 5th. Feebleness and extinction of voice, obviously depending on progressive diminution of the power of expiration. And 6th. The rapid occurrence of acute inflammation of the mucous membrane of the bladder, and which the state of the urine abundantly revealed.

Now, by connecting the symptoms in this case with its pathology, it is rendered evident that the disorganization of the spinal cord commenced below, and from thence rapidly extended upwards. Of this lesion, paralysis of the bladder and of the sphincters of the rectum, were the first positive signs. Paralysis of the lower extremities soon supervened. The nervous supply of the intercostal muscles was next interrupted, from which resulted dyspnœa; whilst nearly at the same time, the muscles of the upper extremities lost their power of voluntary motion, and the sensibility of the cutaneous surface generally was impaired, as high as the clavicles.

The disorganizing process did not extend higher than the centre of the cervical portion of the medulla spinalis, and life was for a little time prolonged by the respiratory functions of the phrenic nerves. It may be presumed that the rapid termination of the case was, to a certain extent, due to the great amount of effusion into the theca vertebralis, which, as it accumulated, compressed the upper portion of the cord and medulla oblongata, and thus cut off the last and only channel through which respiration could be maintained.

The posture voluntarily assumed by the patient was the most favourable for prolonging existence under the circumstances, as the fluid then left the upper portion of the canal by the influence of gravity; and I would venture to advance this peculiar symptom, viz., the comparative freedom from distressing dyspnœa in the erect position of the trunk and the great amount of dyspnœa so suddenly induced when the patient was placed horizontally, as a diagnostic sign of the existence of liquid effusion on the surface of the medulla spinalis.

In conclusion, Dr. M'Dowel directed attention to the similarity of symptoms in this case, and in one brought before the Society by his friend Dr. Hutton(*a*.) In both cases, he said, retention of urine was the first marked symptom of the disease, and in both the appearances on dissection were very much alike; but it was impossible to assign any exciting cause for the disease in the former, such as obviously existed in the latter, where it is recorded that for three days, during which a storm lasted, the patient remained on the deck of a vessel at sea, subjected all the time to constant cold and wet.

Pneumonia following a severe Burn.—Dr. Adams communicated the particulars of a case of burn occurring in a child, named Thomas Cummins, of about ten years of age, who was admitted into the Richmond Hospital upon the 5th of January, 1850. Upon admission he was in a state of collapse, as was evidenced by shivering, coldness of the surface of the body where it was not burned, a small, contracted pulse, and, in addition to these symptoms, there was occasional vomiting. On removing the clothes it was seen that the throat, from ear to ear, the front of the neck, and entire anterior surface of the thorax, were severely burned; some parts of the skin were destroyed to the third degree, and some even to the fourth. The skin of both cavities of the axilla was also destroyed; and on the left side of the thorax the burned surface extended to the back of the scapula.

On Tuesday, the 8th of January (the third day after the injury), reaction set in. Inflammatory fever had supervened, and some sloughs began to separate. On the eighth day he became affected with a short cough and a slight amount of dyspnœa, but did not complain of this or of any pain in the chest.

On the 15th of January he was evidently worse. His face and

(*a*) Dublin Quarterly Journal of Medical Science, N. S., vol. iv. p. 233.

lips were now quite livid; respiration 50, pulse 140; the alæ nasi greatly dilated during the respiratory efforts, and all the muscles of respiration seemed actively engaged. Still he made no complaint of the dyspnœa. There was a slight short cough, but there was not any appearance of pneumonic expectoration. The burned surface also bore a healthy aspect. At length the boy sank and died, on the thirteenth day from the accident.

Autopsy.—Recent adhesions were found between the pleura costalis and pulmonalis, corresponding to that portion of the membrane which was situated immediately beneath the burn; and the lungs presented the usual anatomical characters of pneumonia in the parts which lay subjacent to the burned and ulcerated integuments. It was an example of true pneumonia, and not merely that hyperemic and congested state of the pulmonary tissues found in those who have been carried off in the early stages of a burn: a state of the lung attributed by Dupuytren to the repulsion from the surface and concentration of the blood to the internal parts of the body. The inferior and posterior surface of the right lung was in a state of splenization, that is to say, it resembled very much the normal appearance of the interior of the spleen; and the anterior lobe of the left lung was in the second stage of pneumonia, or that of hepatization. There was also some congestion of the lining membrane of the trachea and bronchial tubes. The mucous membrane of the stomach was healthy, and no alteration seemed to have taken place in the appearance of this structure in the duodenum.

Remarks.—Heretofore the attention of the profession has been much directed to the treatment of burns, but the history of burns was very incomplete, until the eminent surgeon of the Hôtel-Dieu of Paris directed the energies of his mind to discover what were the anatomical characters of these severe injuries. Some of his observations satisfactorily accounted for the symptoms of gastro-enteric fever which frequently ensued on burns; and Mr. Curling, of London, has followed up well his investigations, and pointed out that the duodenum was very frequently the seat of ulcerations in cases of burns. Before this Society there have also been two cases of ulcerated duodenum brought forward by Doctor Hutton.

The case which I now present is only one of many examples of extensive burns in which I have found the stomach and duodenum untouched, while in the lungs had been found well-marked traces of pneumonia. This I think the more important to call attention to, because the pneumonia is, in some of these cases, during its first periods, latent.

The observation that latent pneumonia sometimes coincides with a bad burn of the surface of the body, is not put forward as anything new, for Dupuytren has pointed out the fact(*a*).

Aneurism of the Aorta.—Dr. Lyons laid before the Society the recent parts in a case of thoracic aneurism, which had been taken

(*a*) Leçons Orales, tom. i. p. 441.

from a female subject brought for dissection to the Original School of Medicine, Peter-street. He regretted that the very imperfect connexion which exists between the dissecting room and the hospital prevented him from detailing any of the symptoms which might have attended this case during life, as all his efforts to trace the particulars of the patient's death had been quite unsuccessful; however, he considered that morbid specimens, even though unattended with an account of their clinical characters, were often capable of throwing light on important questions of pathology, as, for instance, the association of diseases, &c.

The present case was an example of aneurism of the thoracic aorta, occupying at least six inches of the vessel, and presenting a combination of the fusiform dilatation, engaging all the coats of the artery, and giving origin at its inferior part to a small sacciform tumour, in which only the cellular coat appeared to be concerned.

The fusiform dilatation extended from the third dorsal vertebra or termination of the arch, to within a very short distance of the diaphragm, its greatest point of dilatation was about the centre, and both above and below it gradually diminished in size. This tumour lay principally on the left side of the bodies of the dorsal vertebræ, but also advanced a little on their anterior face; the root of the left lung was considerably pushed forwards, and the left pleural cavity much diminished in size, while the heart was thrown directly forwards, and appeared much more prominent than natural. The bodies of the vertebræ were perfectly healthy, and presented not the slightest trace of erosion either internally or on the surface. A small tumour about the size of a walnut projected towards the right side and into the posterior mediastinum, behind the heart, from the most inferior part of this fusiform dilatation; it was contracted a little at the point of junction; and the hollow thus formed between the two lodged the œsophagus, which was a little flattened out laterally, but had not contracted any adhesions to the sac, and indeed was apparently little inconvenienced by the pressure which it must have sustained between this tumour and the heart. This smaller or secondary tumour lay in front of the vertebral column, which it had not in the slightest degree eroded, but had pushed before it, towards the right side, the trunk of the vena azygos, without causing the enlargement of this vein, or diminishing the caliber of any of its tributary branches. This, the smaller tumour, presented a hard resisting feel, very different from the sensation conveyed to the finger by the fusiform tumour, which was soft and yielding in most parts.

An incision having been made, so as to lay open the cavity of both, the large dilatation was found filled with a *coagulum of blood*, lodging in its centre a cylinder of the paint used for injecting the body. The contents of the smaller tumour were very different, consisting entirely of *laminated fibrine*, which nearly filled its cavity, and was very hard and resisting. The internal surface of both tumours was thickly studded with atheromatous deposit, and in many places with prominent and very sharp calcareous spiculæ, which were particularly

abundant at the mouth of the lesser sac. The entire lining membrane of the aorta, traced to its origin, was thickly covered with atheromatous deposits, and the valves (though competent to close the aortic orifice) were much diseased. Both lungs, and the greater part of the bronchial glands, presented a very large deposit of tuberculous matter, and many of the glands contained calcareous concretions. This case, then, adds another to the many proofs hitherto adduced in the records of the Pathological Society, of the compatibility of phthisis and aneurism, on which question it appears that doubts had been formerly entertained by the Dublin School, as Sir. P. Crampton and others have repeatedly made allusion to this combination at former meetings of the Society, as presenting something worthy of remark; and it would appear that an opinion yet prevails with some of the continental pathologists (Rokitansky), as to the impossibility of the two diseases being associated. With regard to the aneurismal tumour, it is very unfortunate that we possess no records of observations made during life, as, arguing from the anatomical relations of parts, the diagnosis would appear to be beset with insurmountable difficulties. The relative position of the heart and aneurismal tumour bears some resemblance to the case detailed by Hope at page 447 of his work on Diseases of the Heart, but here the similarity ceases.

The phenomena derived from eccentric pressure could hardly be available, in consequence of the condition of the lungs, though the left bronchus must have been subjected to a pressure from behind forwards. The position of the œsophagus as it lay behind the heart, lodged in a superficial groove between the greater and lesser sac, might probably have given indications from the presence of dysphagia. The absence of venous dilatation or obliteration, though the azygos was carried so much to the right side round the convex margin of the lesser tumour, was certainly remarkable. A consideration of the manner in which the heart was thrown forward renders it highly probable that some phenomena, such as those which existed in Hope's case, were present, such as jogging impulse, &c.

With regard to the second class of diagnostic symptoms, or those resulting from *interference with sonoriety*, the condition of the lungs prevents the possibility of their having been appreciable, while the third great class of direct physical signs, as developed by the motor and auscultatory principles of the sac, could hardly have been evidenced in any way from the great depth at which the tumour was situated in the thorax.

The grounds for arriving at a diagnosis then would appear in such a case to be extremely limited, and referable only to the results of pressure in obstructing the œsophagus, and throwing the heart prominently forward.

Psoas Abscess bursting into the Cavity of the Peritoneum.—Dr. Stokes exhibited a specimen of psoas abscess originating in inflammation of the muscle and its sheath, independent of spinal disease, and proving fatal by bursting into the peritoneal cavity. The

patient was a man about forty years of age, who was admitted into the Meath Hospital, January 8th, 1850, labouring under the symptoms of bronchitis; there were also present some of the phenomena of pulmonary emphysema. He was treated in the usual way; mild antimonials were given, and counter-irritation applied to the chest, under which plan his condition became so far improved that he was placed in the convalescent ward of the hospital, and the case proceeded favourably until January 17th, when, for the first time, he complained of pain in the left iliac region; his bowels became constipated, and he experienced an unpleasant feeling of heaviness. On the following morning the abdomen was somewhat enlarged, and, immediately above Poupart's ligament, there was a considerable degree of hardness and tumefaction detected, which gave the feeling of two ridges with a sulcus between them: there was no fluctuation. No further change took place for the next two days. Then, however, the patient was suddenly seized with agonizing pain in the same situation, extending from thence over the entire abdomen. This attack was followed quickly by nausea, retching, and extraordinary prostration of strength, and the abdomen became tympanitic; he soon afterwards fell into a tranquil sleep, and died at two o'clock on the following morning.

Autopsy.—On opening the cavity of the abdomen the viscera were found covered with lymph recently effused. Five or six ounces of purulent matter were discovered in the cavity of the pelvis. The peritoneum was remarkably vascular, and the bladder was contracted to one-third of its natural size. An irregular opening, about an inch in length, was seen in the sheath of the psoas muscle, corresponding in situation to the last lumbar vertebra; by means of this aperture, the interior of the sheath (which contained purulent matter) communicated with the peritoneal cavity. There was no disease of the vertebræ.

Small-pox with Purpura Hæmorrhagica.—Dr. Gordon exhibited the uterus and kidneys, and coloured drawings of the external appearances of the eruption, and of the recent condition of the kidneys, in the following case:

An unmarried female, twenty-three years of age, was admitted into the Hardwicke Hospital during the past week, affected with small-pox. She had been a servant, and appeared to have been well fed, and in tolerably comfortable circumstances. She had never been vaccinated.

She was now extremely pale and very weak; the surface of the body was covered with an extensive eruption of exceedingly minute papulæ, confluent and very flat on the surface; and in addition to these were observed several purpuric spots, chiefly over the extremities; some of these were very small and bright red, others much larger, and of a dark blue colour; her skin was cold, the pulse very small and rapid. It was the fourth day of her illness, the second day of the eruption; she made no complaint, except of weakness, and great pain in the loins.

The same evening she was suddenly seized with menorrhagia to a very great extent, and had also hematuria, with some vomiting and diarrhœa; this last, however, was not attended with any discharge of blood. The uterine hemorrhage was controlled, but the constitution seemed to have lost all power of rallying, although stimulants and restoratives were freely administered. She expired on the day after her admission, in a manner exactly like those who die of hemorrhage after parturition. The variolous eruption had undergone no change since the previous day.

Post Mortem Examination.—The variolous eruption was general; the papulæ were very small, flat, and confluent, but very easily recognized, however, with the aid of a magnifying glass; numerous spots of purpura were observed over the body, but particularly over the lower extremities, of various sizes, from that of a pin's head to a section of a pea. On opening the thorax the lungs presented a pale, anemic appearance, and were somewhat emphysematous; a few purpuric spots existed beneath the serous membrane covering the heart. The gastro-intestinal mucous membrane presented, in some places, spots of congestion and vascularity; and on raising up the intestines from the true pelvis a small quantity (about two ounces) of dark coagulated blood was found. A careful examination was instituted to discover the source of this hemorrhage, and it was at first supposed that it was a case of hemorrhagic peritonitis, as described by Broussais, and similar to the more ordinary disease of hemorrhagic pleurisy; but in this case the redness observable on the peritoneum was confined to the parts contained within the true pelvis, and, moreover, appeared to arise from imbibition rather than from true vascularity, as it could be removed, in a great measure, by frequent washing, and the *vascularity* of the serous membrane, which would be sufficient to give rise to extravasation, did not exist; there was, moreover, complete absence of any exudation of lymph. It was, therefore, considered that the blood had escaped from the uterus and its appendages, through the open extremities of the Fallopian tubes, as, according to Andral, sometimes occurs in cases of purulent collections. This view was confirmed when, upon a careful examination of these parts by Dr. Montgomery, he found a quantity of coagulated blood within the cavity of the uterus, and also in the canal of the Fallopian tubes, the mucous membrane throughout being greatly congested; and, moreover, that extravasations of blood had taken place beneath the peritoneum at the extremity of the Fallopian tubes.

The kidneys were of a dark red colour, and, when divided, presented a very congested appearance, and blood exuded from many points when pressure was made; several spots of extravasated blood were found in the kidneys, in both the cortical and tubular portions, but particularly in the latter; and the pelvis and calyces of each kidney were distended with black, semi-coagulated blood, which was found also in the ureters. When this was carefully washed off, the mucous membrane was still indelibly dyed of a dark purple colour.

The bladder was empty; its mucous membrane of a very light pinkish colour. There was no variolous eruption found in any part of the mucous system, except the mouth.

Dr. Gordon said that renal hemorrhage has been long considered one of the gravest symptoms in small-pox, particularly if accompanied by petechiæ on the skin, or purpuræ. This fact is alluded to by Sydenham and others. Rayer has noticed this combination, and delineates the post mortem appearances which he found in such cases:—"Des ecchymoses dans la bassinet et des pétechies dans la substance corticale." His delineations of this affection(*a*) are remarkably similar to that executed by Mr. Conolly from the above case.

Rayer considers that these cases are not rare, and quotes one at length from Barth, called by him *hæmaturia variolosa*, and which was in many points exactly like that just recorded.

Dr. Gordon said he had brought forward the case principally to illustrate one of the various modes in which variola in the early stage proves fatal,—that disease being at present epidemic in this city to a very great extent; and also to point out the occurrence of hemorrhage from the mucous surface into the cavity of the peritoneum, an occurrence which has not been often observed.—*Feb.* 9, 1850. *Richmond Hospital Museum.*

Hydrocephalus; Scrofulous Tubercles in the Cerebellum.—Dr. Banks presented the recent specimen, and gave the following details of a case of tubercles in the cerebellum.

The patient, a boy about eight years of age, was admitted into the Whitworth Hospital on the 20th of January, 1850. The history of the case, as it was ascertained from the boy's father, was far from satisfactory. It appeared that, about sixteen months previously to admission, he received a severe injury of the head, by falling from a considerable height. The wound on the head did not heal for many months; but his general health continued good until about four or five months prior to his admission. He then became fretful and chilly; and was drowsy during the day, but restless at night. He was observed to grind his teeth occasionally during his sleep, and sometimes he would awake with a scream. At times his appetite was tolerably good, but at other times he had an utter disinclination for food. Matters thus went on until about one month before his admission into the hospital, when, for the first time, his vision became impaired. He could no longer see objects with the same distinctness as formerly, and he groped his way about the room like a person who was half blind. When taken into the house his condition was as follows. He was a most unhealthy, strumous-looking child, with a hare-lip on the right side of the median line, which had not been operated upon. His head was much larger than was usual in children of his age, and there were scattered over it some patches of porrigo

(*a*) *Vide* Atlas, pl. 33, figs. 6 and 7; and pl. 34, figs. 5 and 8.

favosa. The pupils were enormously dilated, and contracted but little on the approach of a strong light. He was not, however, perfectly blind, though as nearly so as possible. The measurements of the head were as follows: circumference, twenty inches; across the head, from ear to ear, eleven and a half inches; and from the occiput to the nasal protuberance of the frontal bone, twelve inches. The pulse was 76 and very weak, and on making him walk he moved about with a most unsteady gait. Up to the 20th of January, the date of his admission, he had no convulsions. On the morning of the 29th the pulse was 96; and in the course of that day, whilst being led across the ward by another patient, he suddenly fell down, and remained for two or three minutes in a state of insensibility. On being placed in bed he fell into a profound sleep, and on awaking his pulse had fallen to 70. On the 1st of February he awoke suddenly from sleep, screaming violently, and soon afterwards he became sick, and retched incessantly. The next day he complained of violent pain in the head on awaking from sleep, and was attacked with convulsions, the muscles of both sides of the body being equally affected: each fit lasted from five to seven minutes. On the fifth of February he was again seized with convulsions, and after each convulsion he fell into a state of coma. The eyes were closed, the nose, lips, and ears became blue, and the pulse fell as low as 40. Respiration was only eight in the minute, and the pupils contracted to the size of a pin's head. For some time before his death, however, the pupils gradually dilated, though in a very unequal manner, and just previously to his demise they had enlarged to the utmost extent.

Post Mortem Examination.—There was a circumstance worthy of notice observed after the patient's death, namely, that the pupils, which were dilated to the utmost possible extent shortly before his death, about four hours subsequently to that event had contracted to their ordinary size; a point of some interest in connexion with the question of the muscularity of the iris. On opening the head the arachnoid membrane was observed to be drier than natural, and the brain itself much larger than might be expected in a boy of nine years of age. Two ounces of fluid were found at the base of the organ; the ventricles were much enlarged, and contained about three ounces of clear serum. In the inferior and posterior part of the right lobe of the cerebrum a scrofulous tubercle of the size of a walnut was detected. It was of a somewhat circular shape, and of a yellow colour slightly tinged with green. There was a second tubercle, about as large as a pea, in the left lobe of the cerebellum, but differing from that in the right lobe, in presenting a laminated appearance. The deposit of tubercle was not confined to the brain, but had taken place in the lungs and mesenteric glands, and in one of the kidneys. The opposed surfaces of the pleuræ were adherent to each other, as were also those of the pericardium.

Scirrhous Tumour of the Stomach. — Dr. Lees drew attention to a specimen of disease of the stomach, taken from the body of a man who had lately died under his care in the Meath Hospital.

The patient was a sailor aged about forty-five years, and at the time of his admission was suffering from severe vomiting and obstinate constipation. He presented the appearance of extreme emaciation, and a slight degree of jaundice. He stated that he had enjoyed good health until about ten weeks previously, when, for the first time, he experienced a sensation of weight and uneasiness in the left side, which was soon afterwards followed by the usual symptoms of dyspepsia, heartburn, flatulence, and costiveness. About fourteen days before he entered the hospital, he excited vomiting by tickling the fauces, and from thenceforth he vomited almost everything he took into his stomach, up to the period of his admission. He suffered greatly from thirst, and the matter he vomited was so exceedingly acid as to set his teeth on edge, and had the appearance of "coffee grounds." The abdomen was not painful under pressure, but was contracted in the same manner as in painters' colic; and in making an examination, a tumour was felt above, and a little to the right of the umbilicus. This tumour was very hard to the touch, and gave a kind of tympanitic dulness on percussion with the fingers, but without communicating any pulsation. For three weeks before admission his bowels had not discharged anything of a feculent nature, but occasionally a frothy matter. The diagnosis of scirrhus of the pylorus was made from the discovery of the tumour above the umbilicus, taken in connexion with the general appearance of the patient, and the obstinate and peculiar character of the vomiting. The man speedily sank and died, every kind of palliative treatment having been employed without effect.

Post Mortem Examination.—About a pint of serous fluid was formed within the cavity of the abdomen. The tumour which was detected during life was discovered at the pyloric end of the stomach, and the superior transverse portion of the duodenum was contracted into a hard cartilaginous mass. The pyloric orifice of the stomach was apparently much narrowed, and on cutting into it a peculiar dense fibrous structure was observed, with slight abrasions of the mucous membrane in some places. The omentum was highly vascular, loaded with hard, granular fat; the surface was as if fine sand had been scattered through it. The peritoneal surface of the intestines was thickly covered with the same small granular bodies, and there was one spot in the liver, showing that the disease had extended to that organ also. The drawing he held in his hand exhibited the following microscopic appearances under a power of 300 linear diameters.

A section from the pylorus presented cells with nuclei, but no nucleoli, on adding acetic acid. There were also fusiform or caudate bodies, and granular bodies, probably naked nuclei.

A section from the liver showed cells with nuclei, but no nucleoli; and a section from the peritoneum showed oval cells containing one nucleus not altered by adding acetic acid.

These drawings did not represent the usual appearances of scirrhus, but Dr. Lyons had also examined the specimen, and would account for the apparent differences.

Dr. Lyons had submitted two portions of the diseased structure to microsopic examination, and though he entertained no doubt that they properly belonged to the class of true scirrhous formations, he found that the appearances presented differed somewhat from those usually laid down by systematic writers, or delineated in plates. The sections he had examined were taken, the one from the scirrhous mass existing in the pylorus, the other from the omentum. In each of these there was a complete absence of the fibrous stroma, which usually forms the basis of such growths, the interlacing fibres of which generally enclose oval or polygonal spaces, lodging cells in different stages of development, and presenting nuclei, and occasionally nucleoli. In this instance, however, the most carefully made section failed to exhibit any trace of stroma; and the entire mass appeared to be composed of cells, which, with very few exceptions, were destitute of any distinct nucleus, and corresponded pretty accurately with those designated by Bennett the compound granular cells. These cells were either agglomerated together in irregular masses, or scattered in an isolated manner; and it was amongst the latter that the very few which presented nuclei and imperfect nucleoli were found. All of them were surrounded by a finely granular matter, and appeared the only constituents of which the diseased masses seemed to be formed. The cells presented a flattened, disk-like appearance, and a general absence of nuclei and nucleoli; and, taken in combination with the absence of fibrous stroma, these characters were sufficiently remarkable, in a specimen of disease which presented so many of the external features of scirrhus. Repeated observations went to show how little dependence could be placed on the presence or absence of particular characters; at one time supposed to be quite competent to decide the question of malignancy, in cases of diseased products; and while it had been abundantly proved that the compound granular cell, at one time believed to be found only in inflammatory formations, could be looked for in cancer and other growths, it was no less certain that the "*cancer cell*" might be found in non-malignant formations, and therefore signally failed as a means of establishing a diagnosis from the consideration of *one element* of disease. In the case under observation, it appeared that the absence of fibrous stroma was not sufficient to warrant us in excluding the specimen from the class of scirrhus, with whose characteristics it presented a general agreement in external features, though, as was seen, the microscope pointed out important differences.

Senile Gangrene.—Dr. O'Ferrall offered some remarks upon a case of senile gangrene which was lately under his care in St. Vincent's Hospital.

The patient, a man between fifty and sixty years of age, was taken into the hospital, with one of his toes affected with gangrene. The disease, which was then confined to the inside of the fourth toe, had all the peculiar characteristics of senile gangrene, being black, and having a well-defined margin bounding the deadened parts: beyond these a dusky redness extended over the dorsum of the foot.

On the dorsum of the foot, the redness disappeared on pressure; but in the vicinity of the affected toe, pressure had scarcely any effect in removing the colour. The pain in the part was very severe, and usually increased in the night. The suffering of the patient was strongly marked in his countenance, which had an anxious and pallid aspect. His whole frame was much emaciated, but he stated that he had not suffered any serious amount of illness until about three or four weeks before his admission. There could be no doubt of the nature of this case, and of course very little hope was entertained of the man's recovery. The state of the arteries in the leg was examined; the external iliac and the femoral, from above downwards, as far as Scarpa's space, beat with the same strength as those of the opposite side, but beyond this locality no pulsation could be felt; no pulse could be detected in the situation of the tibial arteries. The treatment employed in the case was not very active. In consequence of the painful state of the foot, and the disappearance of the red blush on the surface, on pressure, it was thought expedient to apply a few leeches on the instep, although no hope was entertained of affording any permanent benefit thereby. The application of the leeches was, however, followed by considerable relief of the patient's sufferings, both the redness of the surface and the pain having diminished very much. After a few days more, the experiment was repeated, and was again attended with a diminution of the pain and redness. But little opium was administered, as it was remarked that the patient's mind was disposed to ramble, and that he talked a good deal in his sleep. At length the blackness appeared on another toe, and gained a little on the dorsum of the foot; from thence it gradually crept towards the instep, until it arrived about half-way up the foot. He now complained less of the foot, and very much of pain in the ham, which was increased by pressure: a few leeches applied here gave considerable relief. The shrinking of the foot was progressive with the extension of the blackness, until the toes and foot acquired that peculiar lateral contraction which is always noticed in such cases, so that when the affected foot was compared with that of the opposite side, it was fully one-third narrower. It was also remarked that the third toe began to ride over the rest in proportion as the transverse contraction of the foot took place, so that when the whole limb was involved, it rode completely over the other toes; but this circumstance is not peculiar to the present case. At length the patient gradually sank, and died in a state of coma.

Before death, the painful state of the ham was followed by a contracted condition of the limb, insomuch that the knee was drawn up on the pelvis, towards his chest, and could not be brought down to its natural situation without causing great pain to the patient. But, what was even more remarkable, the arm of the same side began to contract in like manner, until the hand became firmly pressed against the chest. In fact, the appearance of the two limbs resembled that condition called paralytic contraction, to which he had before drawn the attention of the Society.

Autopsy.—The brain was first carefully examined; it was remarkably firm under the finger; the superficial veins and sinuses were distended; and there was a considerable amount of sub-arachnoid effusion. The basilar artery was obliterated at one spot by a firm coagulum, and although a careful examination was made, nothing further was found to explain the contracted condition of the left limbs. The heart was small, and a clot, which sprang out of the right ventricle, between the carneæ columnæ, at which situation it was partly white and fibrinous, and partly of a dark colour, was found in the pulmonary artery. This fibrinous prolongation extended through the valves into the pulmonary artery, as far as the place where it bifurcated. The left ventricle contained a quantity of black blood, as was usual in cases of death by syncope. The aortic valves were not in the least degree impeded, or at least prevented from closing, by the presence of a clot; but outside these valves a fibrinous clot was observed, which extended upwards as high as the arch of the aorta, and for some distance also downwards into the descending aorta. Small fibres of the same clot extended into the innominata, left subclavian, and carotid arteries. The arch of the aorta was perhaps a little more rigid than natural, but it did not contain any of those atheromatous deposits which were regarded as characteristic of aortic disease. As the vessel was followed down to its bifurcation into the common iliac arteries, a patch of distinct calcareous deposition was detected at the angle between these two vessels; and on tracing the artery still further, the vessel was found very much thickened, though not in any degree obstructed. Where it became the popliteal artery, it was completely obstructed; and on making a section of the coats of the artery they were found very much thickened, and, as it were, continuous with the plug which created the obstruction. The colour of the plug was yellowish-white, except in its mesial line, which presented a reddish appearance, and from which a minute quantity of reddish fluid could be made to ooze by pressure. Below the popliteal region, the vessel became again pervious, though its caliber was exceedingly small. The anterior and posterior tibial arteries were pervious, but greatly thickened; and lower down, towards the gangrenous parts, the vessel was contracted in a remarkable degree, and plugged up. It was an exceedingly interesting fact, that the arteries of the opposite side presented a nearly equal amount of alteration of structure and appearance, so as to favour the notion of symmetry in organic changes.

Immediately below the bifurcation of the aorta, there was a considerable thickening of both iliac arteries, extending for about an inch and a half, and involving the posterior and internal thirds of the vessels. A section of this thickening showed that the deposit lay between the internal and middle coats of the artery, and that its centre contained a distinct calcareous, gritty substance. About the situation of Poupart's ligament, the arteries of both sides were considerably thickened; and in the course of the vessels downwards,

there were several slight thickenings, which were remarkably symmetrical.

The doctrine of symmetry had been very ably supported by Bizot, who contended that, in diseases of the arterial system, symmetry of organic changes was an absolute law; that the amount of changes at one side was usually represented by an equal amount at the other: and certainly the doctrine was borne out in the present case, for the amount of alteration was equal at both sides, with this single exception, that a portion of the popliteal artery at the left side was obstructed, whilst the corresponding portion at the right side was merely thickened, with narrowing of its tube. Another remarkable feature of the case was the disposition of the blood to coagulate, as evidenced by the fibrinous clots in the heart and elsewhere.

Œdema of the Glottis.—Dr. Law communicated the following particulars of a case of fatal œdema of the glottis, occurring in connexion with small-pox. The subject of the case was a man aged thirty-two years, of robust habit, who had been, it was alleged, vaccinated. He was admitted into Sir Patrick Dun's Hospital, labouring under an attack of small-pox, of three days' standing. The eruption, at the time of admission, was very thick upon the face and upper and lower extremities, but much less so upon the trunk. The patient was what would be termed "heavily sick," being greatly oppressed with the disease, and experiencing no relief, as patients attacked with secondary small-pox usually do, on the appearance of the eruption. The case went on thus for some days, the eruption becoming more and more apparent every day, but exhibiting an unhealthy look. The pustules were not prominent, as in a favourable case, but flattened; and the interspaces were occupied with an erysipelatous inflammation, of a deep violet complexion. The fever did not run very high, nor was there any delirium, and after a time the eruption became confluent in several places, particularly about the knee and elbow joints. Matters went on in this way up to the twelfth day, the patient neither making any complaint nor presenting any alarming symptoms, except the unhealthy appearance of the eruption. On the morning of the thirteenth day, however, Dr. Law was greatly surprised to learn that the man had died shortly before his arrival at the hospital. The apothecary informed him that, at about 9 o'clock on the previous night, he began to complain of a difficulty of breathing, and some degree of soreness about the throat; to relieve which, he applied a sinapism externally, and a strong solution of nitrate of silver internally. After this the patient remained quiet during the night; but on the following morning, at 7 o'clock, the distress of breathing returned, though not to such a degree as to induce the apothecary to think there was much danger to be apprehended. Two hours afterwards, however, he was suddenly seized with a convulsion, and died, having swallowed drinks about ten minutes previously.

Autopsy.—On cutting through the integuments, they were found to be infiltrated with a gelatinous fluid, which did not escape when the incision was made. This infiltration had taken place not only into the subcutaneous areolar tissue, but likewise into the areolar tissue throughout the muscular structure.

On examination of the larynx, it exhibited the epiglottis very much thickened, as also the aryteno-epiglottidean folds of membrane, from infiltration of a gelatinous fluid into the submucous tissue. The sides of the rima glottidis were so approximated, that the passage was almost completely obstructed : there were no pustules, either on the tongue or in the larynx or trachea. Dr. Law had not been able to find among the records of œdema of the glottis any case occurring under the same circumstances as the present; nor in the history of small-pox had he either seen or read of a case of the disease terminating fatally from an exactly similar affection of the throat. Every one knew how common it was for the throat to be engaged, and seriously too, in small-pox, from pustules forming on the mucous membrane of the mouth, and extending down the larynx and trachea. In fact, the similarity of pathological susceptibility proved the identity of the skin and mucous membrane. But in the case to which Dr. Law directed attention it was not the mucous membrane that was the seat of disease, but the submucous reticular areolar tissue, into which was infiltrated a fluid exactly similar to that which was found in the subcutaneous and intermuscular areolar tissue.

From the frequency with which Dr. Law had observed this gelatinous fluid effused into parts affected with diffuse inflammation, he was disposed to regard the variolous inflammation extending to the subcutaneous areolar tissue to be of the same nature in the present instance. He further remarked, that he considered the confluence of the eruption to be essentially diffuse inflammation, as contradistinguished from the discrete form in which the pustules were bounded by adhesive inflammation.

Dr. Law also looked upon the peculiar character of the laryngeal affection as confirmatory of his view, that the inflammation in the present case was of the nature of diffuse inflammation, as he conceived that the larynx was peculiarly susceptible of both this and other forms of disease in all that class of formidable affections designated, from their disturbance of the nervous system, constitutional irritation, namely, glanders, malignant pustules, &c. Of this pathological fact he had met with many instances; not alone when the diffuse inflammation occupied parts in the immediate vicinity of the larynx, but when more distant parts were the seat of it.

Dr. Law conceived that to establish a relation between confluent small-pox and diffuse inflammation, and other similar diseases, would explain the low asthenic type of the symptoms that marked this form of the disease,—this low type of symptoms being common to them all.

Regurgitant Disease, with Fusion of the Aortic Valves; Dilated Aorta; Death by Syncope.—Dr. O'Ferrall presented the morbid parts in a case of enlargement of the heart, connected with regurgitation through the aortic valves, and, as often happened, with extensive disease of the aorta itself.

The patient, a man between forty and fifty years of age, was admitted into St. Vincent's Hospital, in a state of extreme exhaustion. He suffered greatly from dyspnœa, and coughed with considerable violence; his pulse was frequent, compressible, and jerking; his strength was very much reduced, and his mind occasionally wandered. On examining his chest, the following phenomena were observed: dulness on percussion over the first and second bones of sternum, over the back of the chest, and extensively over the cardiac region; a rough systolic murmur, loudest about the middle of the sternum; a softer diastolic murmur, loudest at the lower end of that bone. There was a pulsating swelling distinctly visible above the right clavicle, with frémissement to the touch; and general anasarca, which extended to the face. On inquiry, it was ascertained that, on the night of his death, about 11 o'clock, he was observed to leave his bed, and walk about the ward, looking into the other beds, and with all the appearance of a person whose mind was wandering. He was conducted back to his own bed by one of the attendants, who remarked his pallid and exhausted appearance. A drink being given to him, he swallowed it, and almost immediately expired, the previous exertion having induced a fatal attack of syncope.

Autopsy.—The heart was enormously enlarged, and firm. On opening the organ, it was evident that the apex was formed by the left ventricle, which in fact constituted nearly the entire bulk of the organ, the right ventricle being merely a narrow, flattened chamber, placed upon the septum. Both ventricles contained blood. The left appeared to be filled up by a yellowish-white fibrinous mass, which extended through the aortic aperture for some distance into the aorta. When a vertical section of this coagulum was made, it was remarked that its white fibrinous portion composed but a very inconsiderable part of the entire, being in fact a mere pellicle upon its surface. The remainder of the mass, which lay in the ventricle like a coagulum in a cup, was of a dark-red colour; and upon this mass, as the body was in the dorsal position, the buffy or fibrinous layer had been formed. The aorta was greatly enlarged, having been dilated into a sac of considerable dimensions. The branches of the aorta were also dilated, and in some degree thickened; and extensive deposits of calcareous formation, in the form of large plates, had taken place on the interior of the aorta in every direction. The innominata lay much above its usual level, and constituted the pulsating swelling before alluded to. On looking down from the tube into the aortic aperture, the usual appearances did not present, but instead, a long, slightly curved slit, which strongly

reminded Dr. O'Ferrall of the peculiar condition so frequently presented in disease of the left auriculo-ventricular opening, when viewed from the left auricle. This slit-like aperture was formed by a fusion of two of the valves into one, and by an elongation of the other; the free margins were curled backwards, so as to admit of regurgitation through the aperture. It was possible that the two folds might have been originally united, although some traces of the triple valve formation were still observed; but if the valve had been originally triple, it was difficult to account for the elongated condition of the opposite fold. There was no disease in the interior of the heart, and the mitral valve was perfectly sound. The disease was, therefore, to be regarded as one of the aorta, producing considerable dilatation of that tube, and attended with deposition of calcareous matter into and beneath the coats of the vessel, extending as far as the valves, and causing them to curl back in a peculiar manner, so as to lead to regurgitation of the blood through the orifice. The heart itself appeared to have been engaged only so far as its muscular structure was concerned, which had necessarily become hypertrophied from the increased action required to support a reflux current into the left ventricle.

Dr. O'Ferrall observed that the preceding case was of interest, in presenting two distinct lesions, the physical signs of which had been well marked during the lifetime of the patient. It was worthy of their attention, as well from the peculiar form of the diseased valves as from affording a good specimen of the condition of the cavity of the left ventricle (in reference to its contents), in connexion with the death of the patient from syncope.

Suppression of Urine; Urea in the Fluid present in the Ventricles of the Brain.—Dr. Banks called attention to a case which was remarkable for presenting an almost universally diseased state of the system, and laid the morbid parts before the Society. The facts of the case were the following.

The patient, a man about fifty years of age, and a painter by occupation, was admitted into the Whitworth Hospital on the 16th February, 1850. It appeared from his own statement that for many years past he was a man of intemperate habits, of which his face was a very truthful index. From the nature of his occupation, he was necessarily exposed to all the vicissitudes of weather, but he, nevertheless, enjoyed tolerably good health during the first thirty years of his life. From that time, however, he began to be subject to inflammatory affections of his chest, which, from his description, were probably bronchitis. He also experienced frequent attacks of rheumatism; and during the previous winter, whilst suffering from one of these, he for the first time began to complain of violent palpitations of the heart, accompanied by uneasy sensations in the cardiac region. About three weeks since, whilst labouring under one of his ordinary bronchitic affections, he observed that his abdomen had become swollen, and that his ankles were to a slight extent anasarcous. For some time the swelling of the abdomen continued to

increase, and the secretion of urine to diminish in the same proportion. When admitted into hospital, the patient's face wore an expression of extreme vacancy ; the pupils were rather dilated ; the eyes were heavy ; and he was so exceedingly stupid, that it was impossible to obtain from him a satisfactory account of his previous state of health. Bronchial râles were heard over the whole extent of the chest; and, corresponding with these, there was an abnormal dulness of sound on percussion. The abdomen was enormously swollen, partly from liquid effusion, and partly from tympanitis, and it was also tender upon pressure. He suffered occasionally from diarrhœa after, and for some time previously to, his admission; and on the day he was taken into hospital he had frequent evacuations, of a dark-greenish colour, from the bowels. On the same day he passed barely two teaspoonfuls of urine ; and from that time until his death, which happened on the fourth day, not a single drop of urine came away. With some difficulty, arising from the existence of a congenital phimosis, a catheter was introduced, and it was then ascertained that the bladder was quite empty. Throughout the whole progress of the case, neither coma nor convulsions supervened; but the patient frequently roared and screamed, particularly when the abdomen was pressed with the hand. This extreme sensibility was not, however, confined to the abdomen, but was also connected with the entire surface of the body, though in a less remarkable degree.

Autopsy.—On examining the body, an extent of disease very rarely met with was presented to view. The membranes of the brain were opaque, and a considerable quantity of fluid, probably amounting to three ounces, was found beneath the arachnoid. Some fluid was also observed at the base of the brain, and nearly three ounces in the ventricles. The sulci of the brain were filled with a semi-fluid gelatinous effusion, and the whole organ was paler and harder than natural. The right lung was united by adhesions to the costal pleura ; and the left was extensively infiltrated with serous fluid, so as to resemble a sponge filled with water. There was also a little serum in each pleura. As might be conjectured from the frequent attacks of rheumatism to which the patient was subject, the pericardium was universally adherent by a cellular kind of attachment, which was easily broken through. The walls of the left ventricle were much hypertrophied, and the lining membrane of the heart was more opaque than natural. The mitral valve was greatly thickened, and a number of warty vegetations were found upon its edges. The semilunar valves were thicker and more opaque than usual; and the lining membrane of the interior of the aorta was covered with atheromatous deposition. A large quantity of fluid was found in the cavity of the peritoneum, amounting to nearly two gallons; the liver was cirrhosed, and as hard as brawn; and the mucous membrane of the intestines was thicker and softer than natural. The kidneys were partially congested, and of a deep violet colour, and no urine was found either in them, in the ureters,

or in the bladder. The ureters seemed healthy ; the bladder was rather small, and, though contracted, did not present any morbid appearance. The fluid discovered in the ventricles of the brain was subjected to chemical analysis by Dr. Moore, of Anne-street, and was found to contain a considerable quantity of urea.

Dr. Banks observed that it would be interesting, in a case presenting such an unusual amount of disease as the foregoing, to discover the starting point. The cirrhosis might be explained as having, in all probability, originated in the intemperate habits of the patient. It was by no means unlikely that the heart became attacked with inflammation during the previous winter, whilst the patient was suffering from one of his rheumatic seizures, and that the result was an adherent pericardium. In this case, death did not take place at so early a period as it usually does when suppression of urine is complete : the existence of diarrhœa may go far to explain this. It was an interesting feature in the case, that the patient did not die as persons usually do, when there has been a perfect arrest of secretion by the kidneys. Neither coma nor convulsions were present.

The fact connected with the case, to which Dr. Banks particularly directed the attention of the Society, was the existence of urea in the fluid of the ventricles, in such quantity, that a notable amount of nitrate of urea had been readily obtained by Dr. Moore.

Ulceration of the Intestinal Glands, &c.—Dr. Lees exhibited the recent parts, and drew attention to the following case of ulceration of the intestinal glands.

The patient, a young and delicate girl, about nineteen years of age, was admitted into the Meath Hospital on the 14th February, 1850, labouring under symptoms of fever, with hot skin and thirst; but she suffered chiefly from cough and a severe diarrhœa, the latter being remarkable on account of the ochrey-yellow appearance of the stools. She had not the aspect of a person that laboured under ordinary fever ; in fact, her countenance was remarkably pallid, and its hue resembled the complexion of girls affected with chlorosis. She was so listless, that it was scarcely possible to rouse her, or to get an answer to any of the questions put to her. The tongue was fissured, and coated over with whitish fur ; and the abdomen was tender, and tympanitic. This tenderness was chiefly observable in the ileo-cæcal region. A peculiar spasmodic action of the left arm, which she constantly jerked up, was also noticed. The pupils were slightly dilated, and the sibilant râles of bronchitis were heard over the chest. She was also in a state of low delirium. The history of the case, as far as it could be ascertained, was as follows.

She was attacked with pain in the head and left arm, thirst, vomiting, and the usual symptoms of fever, with diarrhœa, about nine days before her admission into hospital. On the day after she came in, she vomited a yellow, bilious-looking matter. There were no maculæ or spots of any kind to be observed upon the skin. She remained in this state for two or three days, during which time the

disease was slightly checked by the treatment, and the fever considerably abated ; but one bad symptom still remained, namely, one of her cheeks was remarkably flushed, and when the flush left one cheek, it almost immediately appeared upon the other. In this way the cheeks continued to be alternately flushed during the further progress of the case ; but the patient, in other respects, went on in a rather favourable manner until the twenty-third day, when Dr. Lees found her in a high state of nervous excitement, accompanied by difficulty of breathing. Her breathing presented a peculiar jerking character, which induced him at first to think that it was to a great extent hysterical ; but having ascertained that she had a rigor on the previous evening, he gave an unfavourable prognosis. The girl sank soon after into a state of collapse, and died.

Autopsy.—On opening the abdomen, the omentum was very fatty; the mesenteric glands were much enlarged, and vascular; and the small intestines near the termination of the ileum presented dark patches, which corresponded with deep ulcerations on the inner coat of the intestines, particularly at the lower part of the ileum and ileo-cæcal valve. These ulcerations seemed to have originated, for the most part, in Peyer's and Brunner's glands. The feculent matter found in the intestines presented the same ochrey hue as the stools did during life. Several ulcerations were also observed in the cæcum; and in some instances, not only the mucous membrane, but even the muscular coats of the intestines, were destroyed.

Dr. Lees remarked, that this case presented one or two points which deserved attention. First, as to the nature of the disease, it would be at once seen, from the drawings he exhibited, that the pathological appearances observed in connexion with the typhoid fever of France were identical with those which were found in the present case. He (Dr. L.) never had met with these appearances in the maculated fever of this country; but Dr. Law had just informed him that, in a case which once fell under his observation, the same appearances were present.

Was this case to be regarded as an example of ordinary enteritis, which was amenable to treatment, and might be successfully combated by antiphlogistic remedies ? He thought not, and chiefly on this account. The peculiarity of the inflammation in the present case was, that it was circumscribed, and confined to the glands alone, the general mucous membrane of the intestines not being at all inflamed. It was, in fact, a specific form of inflammation which appeared to be localized in the glands.

Secondly: Were these ulcerations primary or secondary? Did the fever depend on the presence of the ulcerations, or were these latter secondary to the fever? He was inclined to the latter opinion, for he supposed the fever to be dependent upon the presence of a morbid poison in the blood, and that these ulcerations of the intestines formed one of the secondary phenomena ; just in the same manner as the eruptions in small-pox, measles, and scarlatina, were secondary to the fever, and constituted its anatomical character, though not being the pathological cause of the disease.

Tertiary Syphilis.—Mr. Hamilton exhibited a preparation and drawing, illustrating the pathology of syphilitic disease in the stage termed by French writers "tertiary."

The patient, a man named Patrick Byrne, came to the Richmond Hospital, about a week since, complaining of distressing dyspnœa. His breathing was attended with the peculiar stridor which is characteristic of disease of the larynx. In consequence of the house being full, he was not admitted until the following day; and on the evening of that day, before anything had been done for him, he got up for the purpose of making water, and on returning to his bed, he sank and died in a gradual manner, apparently from exhaustion, and without any urgent dyspnœa.

Autopsy.—The larynx presented traces of disease, which were quite sufficient to explain the cause of the patient's death. The entire of the mucous membrane exhibited traces of chronic inflammation, being red, thickened, and rough; both chordæ vocales were rough, congested, and thicker than natural. On the right side, in the ventricle of the larynx, a small ulceration existed, which laid bare the cartilage beneath. The lungs, as might have been expected, were much congested. On a former occasion, the same patient had been under treatment in the Richmond Hospital for a syphilitic eruption. This eruption, which was best marked about the umbilicus, forehead, and shoulders, was what had been termed by M. Ricord, "the pustulo-crustaceous eruption." The patient, at the same time, suffered from pains in his bones; but Mr. Hamilton had been so constantly in the habit of finding this peculiar form of eruption in connexion with tuberculous disease of the testicle, that he was naturally induced to ask the patient whether he ever had anything the matter with that organ, and he replied that he had been tapped for hydrocele. On making an examination, he detected a hard, knotty, and atrophied testicle at the right side of the scrotum. The left side of the scrotum was enlarged to about the size of a cocoa-nut, and on drawing off the water contained in it, he found the left testicle in pretty much the same condition as the right, being hard, irregular, and diminished in bulk; he, therefore, ventured in the present case to diagnose the existence of tubercles in the testicles, which had caused their atrophy, by inducing absorption of the glandular portion of the organ. On a section being made of the atrophied testicles, there were found in the lower part of the epididymis of each a small, yellow, encysted tubercle, verifying the diagnosis. The glandular substance had nearly disappeared, a small, pulpy, red part, the size of a bean, marking its position.

Aneurism of the superior Mesenteric Artery; Physical Signs; Pulpy Degeneration of the Kidneys; Cardiac Disease.—Dr. O'Ferrall exhibited the recent specimens, and said he was anxious to place upon record the following remarkable case of arterial and renal disease.

The patient, a man named Stapleton, about thirty-two years of age, was admitted into St. Vincent's Hospital, in a very exhausted

state. On coming in, he complained of pains which followed rheumatic fever; and on inquiring into his previous history, it appeared that he had had no less than four attacks of rheumatic fever within the last eleven years. He presented, in a remarkable degree, the anemic aspect, and was in such a state of extreme exhaustion, that it was thought syncope might at any moment take place. His pulse had the peculiar jerking character usually found in connexion with regurgitation through the aortic valves; and on examining the chest, a well-marked diastolic murmur was discovered.

On the next day, the patient being in bed, he proceeded to examine the abdomen; here a pulsation was visible, about midway between the umbilicus and the xiphoid cartilage; and on carefully examining in this region, a tumour was discovered. This tumour was about the size of a small apple, of a spherical shape, and lay a little to the left side of the median line. It was not perfectly solid, inasmuch as a fluctuation was perceived when it was carefully manipulated between the fingers of both hands, and a strong diastolic pulsation was also detected in it. When pressure was made upon the tumour, it became partially emptied, but soon filled again, producing the peculiar lateral wave which is recognised as the diastolic pulsation. A distinct frémissement was communicated to the hand, and when the stethoscope was laid over the part without making pressure upon it, a loud soufflet was audible. The tumour was to a certain extent moveable, and could be displaced to a short distance to the right of the median line, still, however, retaining its physical signs.

On inquiring into the state of the various functions, it was found that his urine was albuminous; so that, with such a complication of untoward signs and symptoms, no hope could be entertained of his recovery. From day to day the tumour presented the same unvarying characters, with one or two exceptions, which are worthy of being recorded.

For example, on one occasion the frémissement was found to be limited to the track of a vessel which crossed the surface of the tumour, being elicited when the fingers were pressed along the course of the vessel, and lost exactly at each side of it.

His first impression was, that the frémissement did not essentially belong to the tumour; but on subsequent occasions he found that in every part of the tumour the phenomenon was elicited by the slightest pressure.

Now, what was the nature of this tumour? That its contents were liquid was inferred from the fluctuation. It might be an abscess, and its pulsation might be derived from the aorta. But the liquid could be displaced. This latter fact did not disprove the possibility of its being an abscess, for a depot originating in a carious vertebra might present prolongations into which the matter could for a moment be pressed by the fingers. The peculiar mode, however, in which the sac was refilled, and the peculiar diastolic movement, left no doubt on his mind that the sac was refilled from the aorta. The diagnosis of aneurism appeared then the most pro-

bable, and it remained to inquire what vessel was likely to be the seat.

An aneurism of the aorta could not be displaced so far from the line of this trunk, nor indeed could the amount of mobility which the tumour presented be supposed to exist in any of its branches but the mesenteric. The superior mesenteric was that which appeared most likely to be engaged.

Having related the signs and symptoms of the case to the Society, it was not necessary to detain them with a detail of the progress of the case towards a fatal termination; and he would at once proceed to describe the appearances of the parts as they were seen at the post mortem examination.

Autopsy.—The heart was remarkably flabby, much more so, indeed, than he had ever found it in any case where regurgitation had taken place through the aortic orifice. The aorta itself was not dilated, but well-marked vegetations were observed upon the free margins of each of its valves. The valves appeared to be shortened in two directions, namely, from corner to corner, and also in the interval between the adherent and free margins. There was, therefore, an amount of organic change quite sufficient to account for the diastolic murmur observed during life. The most remarkable feature of the case, however, was the flaccidity of the heart.

The kidney was next examined, and presented an appearance such as he had never previously met with; it looked as if it was infiltrated with water, and resembled the condition occasionally presented by a kidney when the process of putrefaction had set in. When a section was made through its capsule, the substance of the kidney protruded in a pulpy form, somewhat resembling that of a softened testis, when the tunica albuginea is divided; in fact, its appearance was quite new to him, nor was he able to find in the works of pathological writers any account of a kidney having similar characters.

A portion of the kidney of the opposite side was examined under the microscope, by Dr. Lyons, and he was informed by that gentleman that the Malpighian bodies were completely broken up, and that, altogether, the characters of the kidney were such as had not been heretofore described.

The superior mesenteric artery proved to be the seat of an aneurism about two inches in diameter, which was situated between the layers of the mesentery, and was found on section to be lined throughout with a fibrinous deposit. On examining the diseased artery more minutely, it was found that two minute, pyriform sacs sprang from the vessel, about half an inch nearer to the aorta. These minute aneurisms appeared like diverticula from the vessel; they were pediculated in form, the bulbous portion about the size of a pea, and the neck admitting a small probe to pass from the artery into the fundus of the sac. A section of these little sacs displayed a distinct fibrinous deposit, similar to that which was found within the larger aneurism.

Dr. O'Ferrall said he regarded this aneurism as one of remarkable interest ; first, on account of its great rarity ; and secondly, from the fact that he was able to detect all the physical signs diagnostic of aneurism during the lifetime of the patient, and to place them upon record as well-observed facts. It was scarcely necessary to remark, that the two small aneurisms were not suspected to exist during life.

At a recent meeting of the Medical Society of Edinburgh, Dr. Gairdner brought forward a case of mesenteric aneurism, and mentioned his belief that a double sound in this situation might be considered characteristic of the disease.

Now, with respect to the double sound, he (Dr. O'F.) was persuaded that any person who relied upon it as a guide would fall into serious error. Even in thoracic aneurism, this sign should not be depended on. He has frequently observed the double sound along the aorta in persons who were entirely free from disease.

Dr. Gairdner (whose opinions are entitled to the greatest respect), though proposing that this double sound should be received as diagnostic of aneurism in the abdomen, did not state that it was observed in the particular case he himself adduced ; and in fact it would appear that in that instance no stethoscopic examination of the patient had been made.

Pathology of neglected Paronychia.—Dr. Robert W. Smith, in the absence of Sir Philip Crampton, drew attention to a specimen showing the pathological results produced in a case of neglected paronychia. It was the hand of a man who was admitted into the Meath Hospital in an advanced stage of the disease. The affection originated in a bite which he received in one of his fingers, but he paid very little attention to it until hectic fever supervened, and great disorganization of the hand had taken place. On admission it was deemed necessary to remove the limb at a short distance below the elbow-joint.

Dr. Smith thought this case interesting in a practical point of view, as inculcating the importance of seeking for surgical aid at an early stage of paronychia. This was the fourth specimen which had fallen under his observation, where amputation of the fore-arm was performed in consequence of paronychia induced by bites. In the majority of these cases the sufferers were females, a circumstance which was, he supposed, to be attributed to the fact, that women, when they quarrelled, more frequently used their teeth for the purpose of injuring their opponents, than men. The present case, however, was the second he had met with where a man had been bitten. It would appear that a bite of this kind produced a wound which was both lacerated and contused, and it was easy to understand how such a wound could lacerate a tendon or its sheath, and so produce paronychia. In the treatment of these cases it was necessary to make a very free incision, and if this is not done at an early period, the inflammation spreads with great rapidity along the tendons in the palm of the hand, and involves the synovial membranes of all

the carpal bones, producing ulceration of the cartilages and caries of the bones themselves. From thence it would run up the arm, following the sheaths of the tendons; so that, under all the circumstances of the case, the practice adopted by Sir Philip Crampton (which was approved of by Sir Astley Cooper and others) was the best that could be selected, namely, that of amputating the limb high up. Sir Philip Crampton objected to an operation immediately above the wrist, in consequence of the number of tendons in that situation, and their great liability to be attacked with inflammation, in which event, the inflammation would run up the fore-arm, and, should amputation be performed under such circumstances, produce a number of abscesses in the stump. To avoid this undesirable result, the amputation was performed, in the present instance, at the upper third of the fore-arm. The case formed a good example of the morbid appearances produced by neglected paronychia. The tendons resembled a mass of wet tow, and a number of abscesses surrounded and extended into the wrist-joint.

Inadequacy of the Aortic Valves, with Pulmonary Apoplexy.—Dr. Neligan presented a specimen of disease of the aortic valves, which permitted regurgitation through the valvular orifice. This affection had been well described by Dr. Corrigan, who, from time to time, had brought many examples of it before the Society; and the only novel feature in the present case was the occurrence of pulmonary apoplexy, a rather rare circumstance in connexion with this condition of the heart. The patient, however, did not die of the pulmonary apoplexy, which took place fully twelve days before his death. He was a soldier, and, notwithstanding the affection of his heart, had been able to discharge the arduous duties of an hospital orderly for several years. On referring to the hospital case-book, it appeared that the disease commenced about the year 1844, when he had an attack of acute rheumatism; but this illness did not seem to have been at all severe, as he was able to resume the usual duties of a cavalry soldier at the end of a week. After this he was but twice in hospital, and on each occasion his only complaint was difficulty of breathing, and there was no other symptom of disease discoverable. His countenance presented an appearance sometimes seen in chronic disease of the heart, but rarely so well marked as in this case, the complexion being deep crimson, and the crimson hue bordered by a distinct yellow line just at the front of the ear, and at each side of the nose; and it was remarked that at times the crimson colour would deepen, and extend over the whole face. With regard to the dyspnœa, it was an interesting feature of the case that the man was, at all times, able to sleep with most ease when he lay flat upon the bed; and that sitting up never enabled him to breathe more freely, until about one week before he died, when effusion took place into the pleuræ and pericardium.

Autopsy.—The left ventricle was hypertrophied, and when water was poured into the aorta, it passed freely and in a full stream through the open orifice. On examination it was found that the

free edges of the aortic valves were somewhat cartilaginous. The size of the left ventricle was not so great as it is usually found to be in aortic regurgitation, but still it was an excellent specimen of concentric hypertrophy; and, as Dr. Corrigan had already pointed out in other cases, the heart lay in a transverse position in the chest, the apex being formed, as it invariably was in cases of a similar nature, by the apex of the left ventricle. There were several apoplectic circumscribed clots of black blood throughout both the lungs, but none of them diffuse, which would account for there being no expectoration of blood during life. The period of the occurrence of the pulmonary apoplexy was well marked by an attack of coma, which took place about twelve days before his death, but from the immediate effect of which he seemed to have completely recovered. With respect to the symptoms of the heart disease, he might state that all those which have been ordinarily enumerated were well marked in the present case. There were frémissement, and visible pulsation of the carotid and femoral arteries, and, on elevating the arm, in the arteries of the wrist. A loud, soft bruit accompanied the second sound of the heart, which was constantly present after he had the rheumatic attack. The disease was diagnosed at a very early period, and thenceforward the progress of the case was watched with the utmost care. The immediate cause of his death was not the pulmonary apoplexy, but effusion into the cavities of the pericardium and pleuræ.

Fever complicated by Jaundice.—Dr. Banks communicated the details of a case of fever, followed by jaundice, and terminating in death. The patient, a young woman about nineteen years of age, was admitted into the Hardwicke Hospital on the 29th March, 1850. On inquiry being made into her previous history, she stated she had been in the enjoyment of good health up to the evening of the 25th inst., when she had a shivering fit, which was followed by heat of skin, and the ordinary symptoms of fever; and on the evening of Thursday, the day before her admission, the persons with whom she lodged turned her out into the street, fearing she might communicate the fever to themselves. She passed the night under an open archway, and on Friday, the 29th, she was taken into the hospital. She presented the usual symptoms of mild fever. On the following day she complained of some tenderness in the abdomen, together with a sensation of nausea, and towards evening she threw up some fluid of a green colour. The next day she complained of excessive tenderness over the epigastrium, extending to the right and left hypochondrium. Her tongue was covered with a yellowish fur, and the pulse was about 110, but none of the symptoms indicated a dangerous form of fever. On the 2nd of April, he found her universally jaundiced. The jaundice was of a bright yellow hue, and with its appearance the pain and uneasiness in the abdomen increased, and there was also an abnormal extent of dulness, together with tenderness in the right hypochondrium. She stated that she was likewise suffering from headach, and that she had passed a perfectly

sleepless night. On the 3rd of April, the jaundice was of a still deeper colour, and the slightest pressure on the abdomen caused intense pain. Her respiration was hurried, but on examining her chest with the stethoscope, the lungs were found to be free from disease. Her bowels, which were constipated in the first instance, afterwards became tolerably free, the evacuations being of a dark colour and fetid. The urine resembled an infusion of senna. On the morning of the 4th April, she stated that she had passed a restless night. The expression of her countenance was dull and heavy, and the pain in the abdomen was more severe than ever, so much so that she was unable to make the slightest movement without experiencing the greatest agony, and she complained of the pain passing back from the epigastrium towards the spine. Her pulse was feeble, and her condition extremely low, and she remained in this state until about noon, when she began to rave. At 4 o'clock, P. M., she was seized with convulsions, and she died on the same evening, about two hours later.

Autopsy.—The whole surface of the body was of a bright orange hue, and on throwing back the integuments from the sternum and abdomen, the superficial fat, which existed in considerable quantity, was found to have the same colour. The cartilages of the ribs also, and the abdominal viscera, presented a similar appearance. The lungs were free from disease, but on making a section of one of them, some fluid of a yellow colour was found in the bronchial tubes. The pericardium was loaded with fat of a yellow hue. The fat upon the right ventricle bore the same appearance; and the left ventricle was dilated and thicker than natural. In the cavity of each ventricle a clot of a deep yellow colour was discovered. The liver was enlarged, softer than natural, and readily broke down under pressure. The gall-bladder contained some dark-coloured bile, but its ducts were pervious, and the bile might still be pressed into the intestines. The surface of the duodenum was also of a bright orange hue, and presented the traces of recent acute inflammation. The lining membrane of the œsophagus was of a deep red colour, and the mucous membrane of the stomach of a bright yellow, with small patches of redness here and there. The spleen was greatly enlarged, and broke down upon the slightest pressure. The kidneys were also enlarged and very much congested, and the calices were of a bright yellow colour. No trace of inflammation could be found upon any portion of the peritoneal surface, which seemed to be morbidly dry; but the duodenum had evidently been the seat of intense inflammation. On examining the brain, the dura mater was found to be deeply tinged with the same yellow colour which had permeated the other tissues. The surface of the brain was morbidly vascular, and a gelatinous effusion had taken place beneath the arachnoid. A small amount of fluid, of a yellow colour, was found in the ventricles.

Dr. Banks remarked that the preceding case was rendered interesting by the fact, that for the first few days after the patient

was admitted into hospital, there was nothing whatever to lead him to suppose that the patient's life was in danger. On the 2nd of April she first became jaundiced, and she died on the 4th. The case pointed out the importance which attached to jaundice when it was a complication of fever, and the rapidity with which it had progressed to a fatal termination suggested that the practitioner should be on his guard against forming a favourable prognosis in every case of jaundice which came under his observation. He was disposed to think that the profession had been in the habit of viewing jaundice, both when it occurred alone and as a complication of some other disease, as a far less formidable affection than it really was; but the present case showed the importance which should always be assigned to it, even though aware of the fact that fever complicated with jaundice often terminated favourably.

In this case it appeared to him that the rapid absorption of the bile, in large quantity, immediately upon its formation, and its mixture with the blood, which was evidenced by its almost universal presence in the tissues of the body, was the cause of death. Under such circumstances the bile may, in truth, be looked upon in the light of a poison.

Renal Calculus.—Dr. Lees called attention to a specimen bearing upon the diagnosis of renal disease. The patient, an old woman, had a smooth moveable tumour, which did not pulsate, nearly as large as the hand, in the left hypochondrium just beneath the false ribs of the left side, but not extending as high up as the spleen. It yielded a dull sound on percussion, and the patient suffered from constant vomiting, with diarrhœa. The left leg and foot were œdematous. The woman, who was rapidly sinking when he saw her, died on the following day.

Autopsy.—The omentum was spread over the intestines like a cloth, but, though firmly bound down, there were no adhesions. The tumour presented between the colon and the end of the stomach, and was formed by a large cyst in the left kidney. There were three distinct cysts within the organ, one enormous one, and two of a smaller size. A calculus was found in the largest cyst, and a communication was discovered between the middle and lowest of the three. The urine and calculus were examined by M. Alphonse Gages, assistant chemist to the Museum of Irish Industry, who forwarded Dr. Lees the following report of it:—"The fluid was urine, differing from ordinary urine in containing a smaller quantity of urea, a considerable amount of albumen, and many spangles of cholesterine; it also contained soluble silica and iron. A large quantity of cholesterine was procured from the fluid. An examination of the calculus showed that the nucleus was formed of oxalate of lime, upon which phosphate of lime and triple phosphate had been subsequently deposited."

Dr. Lees thought the preceding case of some interest in connexion with the diagnosis of tumours in the abdomen, for though it might seem an easy matter to a person who had merely seen this

tumour removed from its situation, to form a correct opinion as to its exact nature and situation, yet this was far from the case in the present instance. Indeed, he candidly confessed, that at first he supposed the tumour was connected with the omentum. Incessant vomiting was the chief symptom, and when to this feature of the case was added dulness on percussion over its situation, it made the accurate diagnosis of the disease more difficult. It was the general opinion, that when the kidney was the subject of a disease such as this, a clear sound would be produced by percussion, but such did not occur here; and the circumstance was explained by the autopsy, when it was found that all the intestines were firmly bound down by the omentum. Here then was a tumour, full of fluid, which yielded a dull sound on percussion. With respect to the formation of the cysts, it was not difficult to explain their existence, if they supposed that a calculus became imbedded in the kidney; for the presence of such a foreign body would speedily cause the substance of the organ to become absorbed, and thus produce cysts similar to those which were met with in the present case. The discovery of cholesterine in the fluid taken from the cysts, was an interesting feature in the case. He was unable to say whether this substance was derived from the urine or not, but when he considered that cholesterine was not one of the natural constituents of urine, he was disposed to think it must have been secreted by the surface of the sac itself. It was pretty well known that cholesterine had been already discovered in the blood and in the fluid of hydrocele; and it was, therefore, not altogether improbable that the surface of the sac within the kidney of this old woman might have secreted a fluid more or less resembling what was found in a hydrocele, and, like it, containing cholesterine.

Intestinal Calculus in a Horse.—Dr. Neligan exhibited a calculus of immense size taken from the intestines of a mare. When recently removed from the body of the animal, it weighed three pounds and three quarters, and resembled, as his friend, Dr. M'Donnell, had well remarked, a piece of marine tufa, upon the surface of which small pieces of sponge had grown. The mare in question was nineteen years old at the time of her death, had served in the Carabineers for thirteen years, and during all that time never required a dose of medicine. On that day week, the 30th of March, 1850, she first took ill. The symptoms were those of intestinal obstruction, and she died on the morning of Tuesday, the second of April. A post mortem examination was made by Mr. Cherry, the veterinary surgeon of the regiment, who informed him that a large shovelful of gravel was discovered in the last pouch of the colon, near the commencement of the rectum, and immediately above the calculus, by which its onward progress had probably been arrested. But the chief point of interest was the presence of this huge calculus in the intestines. A specimen of the calculus was given by Dr. Neligan to Mr. W. K. Sullivan for analysis, and that gentleman ascertained that it consisted almost entirely of resin, probably of

the same description as that which was recently found in human fæces; and he might mention, that a considerable quantity of decomposed fæces was detected in the intestines of this animal, particularly in the neighbourhood of the calculus. A substance was observed in the stone, which Dr. Lyons supposed to be the husk of the oat; and a portion of phosphate of lime, which was one of the natural constituents of the oat, was mixed up with the other ingredients. The gravel found in the colon was traced to the Dodder, where the servant who had charge of the mare (which belonged to an officer in the Carabineers), was in the habit of bringing her to drink. The animal was a greedy drinker, and frequently swallowed portions of gravel along with the water. In the museum of Mr. Dycer, of Stephen's-green, there were a large number of calculi which were taken from horses, but none of them were as large as the present specimen; and Mr. Dycer mentioned to Dr. Neligan that in every case of the kind which had fallen under his own observation, there were symptoms sufficiently well marked during life, to enable him to diagnose the existence of a calculus. The present specimen was evidently a biliary calculus, which, in the first instance, passed into the duodenum, and which, after remaining there for a period too short to give rise to inflammation, made its way into the intestines, and there acquired its present large size before it gave rise to the destruction that caused the death of the animal.

Dislocation of the Knee.—Dr. Adams, in bringing forward a case of dislocation of the knee, observed that he concurred in the remark of Sir Astley Cooper, that dislocations of the knee were rare, and that every case of this accident which fell under the observation of the surgeon should be carefully and accurately reported. This injunction of Sir A. Cooper had always been borne in mind by the members of this Society. Already two cases of accidental dislocation of the knee had been brought before it, one of which was detailed by Dr. Hutton, and the other by Mr. Hamilton. Both had been patients in the Richmond Hospital. For the case Dr. Adams was about to adduce,—the features of the injury are well preserved by a cast,—the Society was indebted to Mr. Brabazon, the surgeon of the County Down Infirmary. In this, as in the other two cases just alluded to, the lower extremity of the femur was dislocated backwards and downwards, and the tibia and fibula forwards and upwards in front of the femur. The nature of the injury was here, as it always is, clearly indicated by the appearance of the limb. In fact the dislocation spoke for itself, for the remarkable prominence which presented in the popliteal region, formed by the condyles of the femur, and the nearly horizontal position of the patella, plainly pointed out the nature of the accident. Another circumstance highly characteristic of this dislocation, was the remarkable transverse sulcus existing at the front lower extremity of the femur, in the situation of the attachment of the extensor tendons into the superior margin of the patella. In addition to this there was an increase of circumference of the limb at the knee, measured across

the popliteal region, together with a shortening in the length of the limb, as compared with that of the opposite side, to the extent of two inches or more. The following are the notes of the case.

John Hamill, aged 55, a farmer, a healthy, muscular man, of temperate habits, was admitted into the County Down Infirmary on the 16th of March, 1850, under the following circumstances. He states that on this day, while in the act of descending a ladder, it broke, and he fell from a height of about ten feet. He alighted on his feet, but was then thrown on his side by the force of the fall, and was unable to rise. On examination two hours subsequently, his condition was as follows. The left leg was a little flexed; the foot of this side, somewhat inverted, rested on the dorsum of the right foot; the upper extremity of the tibia and fibula had ascended in front of the lower part of the femur, and the anterior aspect of the patella looked rather upwards than forwards. The posterior part of the condyles of the femur were distinctly felt resting behind the tibia and fibula (which last preserved its relation to the tibia). The outer condyle was especially prominent; the integuments covering this condyle being rendered so very tense that some laceration resulted. It was found impossible either to flex or extend the leg, nor could these movements be communicated; but some degree of lateral motion might be made by the hand of the surgeon. The patient complained of violent pain in the thigh and ankle, and on examination the latter was found to be severely sprained. The foot was cold and glazed, and was the seat of a painful sense of numbness; there was no trace of pulsation in the popliteal or tibial arteries; the muscles of the front of the thigh were very flaccid; a transverse deep sulcus marked the attachment of the extensor tendons to the top of the patella. On accurate measurement the limb was found to be shortened two inches; the circumference of the leg over the patella being two and a half inches; and over the centre of the calf of the leg, two inches and three-quarters more than in the uninjured limb. The reduction was easily accomplished by extension and counter-extension, while Mr. Brabazon made methodical pressure, in opposite directions, on the extremities of the displaced bones. The limb was placed on a straight splint, and cold lotions applied, and within two hours afterwards the foot commenced to grow warm, and pulsation became established in the tibial arteries. In twelve hours there was considerable effusion into the joint, which disappeared, however, in a few days. On the sixteenth day passive motion and friction were resorted to. There was no constitutional disturbance throughout the progress of the case.

He (Dr. Adams) could not conclude without impressing upon the minds of his more youthful hearers, who might hereafter be called upon to deal with dislocations in distant parts of the globe, the great importance of taking casts of the different cases of dislocations which came under their observation, whereby one dislocation might be compared with another, and by this means the student would

make himself and others familiar with the *physiognomy*—if he might use the term—of this class of accidents. He would venture to assert, that any person who carefully examined these casts then exhibited to the Society, would be able to recognise this form of dislocation of the knee at first sight, should he hereafter in the course of his practice happen to meet with a case of the kind, and merely from the peculiar expression or physiognomy the injury presented.

Delirium Tremens, with Typhoid Pneumonia.—Dr. Banks detailed the following case, and exhibited the recent specimen.

The patient, a man aged about forty years, was admitted into the Hardwicke Hospital on the 10th of April, 1850. He stated on admission, that he had been drinking ardent spirits very freely during the last few days, but denied that he was a habitual drunkard. Four days before his admission he became chilly, and soon afterwards he was attacked with shivering, sickness of stomach, and general depression; in consequence of which, as he supposed, he was unable to sleep for several nights. He also had slight cough, with some difficulty of breathing; his voice was husky, and his countenance wore an expression of anxiety; he was uneasy and fidgetty, and, on the day of his admission, complained of a stitch in the right side.

On examining the chest, the respiration was found natural, and the whole of the thorax was resonant on percussion, with the exception of the base of the right lung, where a certain amount of dulness, some feebleness of respiration, and a friction sound, were observed.

On the night of the day on which he was admitted he could not sleep, and it was remarked that he got out of bed during the night, and walked up and down the ward, talking about matters of business. On the following morning it was observed that the dulness, which was at first confined to the very base of the right lung, had extended upwards. No crepitating râle could be heard, but the greater part of the right side was dull on percussion, and respiration was totally inaudible. He passed the next day and night without much change, and on the following night he obtained some sleep. The delirium, however, again supervened, and the patient continued in this state until 10 o'clock on the previous night (April 12th), when he fell into a condition bordering on coma, from which he could be partially roused; but he died on that morning, at 5 o'clock.

Autopsy.—The greater part of the right lung was found in a state of solidification, and in some places had passed into the third stage of pneumonia. On making a section of this lung, a number of yellow patches were observed in different portions of the pulmonary structure, which broke down under the slightest pressure. Lymph had been effused on the base of the right lung, and also on the adjoining pleura. The disease seemed to have just commenced in the left lung, and this again might be said to be in the first stage of pneumonia. There was no trace of pericarditis, but firm clots of fibrine were found filling the cavities of the heart. No evidence could be discovered to indicate that the patient had suffered from

gastritis; but he was able to find traces of duodenitis, not, however, of recent standing. The whole of the surface of the brain was extremely vascular and congested, and the arachnoid membrane was remarkably opaque. There was likewise effusion beneath the arachnoid, in which some blood was observed, presenting what would be considered as indicative of meningeal apoplexy. There was no effusion into the ventricles. The liver was slightly puckered on the surface, and appeared to be in the first stage of cirrhosis.

Dr. Banks observed that the foregoing was one of those cases in which the physician was exceedingly liable to fall into an error of diagnosis. The existence of the pleuritic stitch, and the friction sound, rapidly followed by extensive dulness, and not preceded by the signs of pneumonia, formed a category of circumstances from which a practitioner might be led into the mistake of supposing the case to be an example of pleuritis succeeded by effusion. It was a fact worthy of attention in the case, that the expectoration was slightly viscid, and presented the colour almost peculiar to pneumonia; and this circumstance, together with a knowledge of the frequent occurrence of pneumonia as a complication in cases of delirium tremens from excess, and the extreme rapidity of its formation (the characters of which had been so accurately described by Dr. Stokes), led him to form the opinion that the case was one of typhoid pneumonia, an opinion which was subsequently verified by the post mortem examination. It was now pretty well known that not only inflammation of the lungs, but also of the mucous membrane of the stomach and investing membrane of the heart, was frequently found in connexion with typhoid pneumonia; but in the present case the mucous membrane of the stomach was not inflamed, nor did pericarditis exist, but the inflammation of the lung was very extensive, and such was the rapidity of its progress, that, in less than twenty-four hours, the lung which had been previously resonant on percussion, and readily permitted the air to enter it, had become perfectly solid.

Scrofulous Ulceration of the Intestines.—Dr. Lees exhibited the morbid appearances in a case, for an account of which he was indebted to his friend Dr. Shannon.

The patient, a female, was under Dr. Shannon's care, labouring under diarrhœa and obstinate vomiting. After a short time, she sank and died, and the following appearances were observed when the body was opened. The peritoneum was of a black, or rather deep blue tint, as if it had been brushed over with a camel's hair pencil; and the mesentery was dotted with the same curious-looking appearance. The whole of the ileum was one track of ulceration, and the ileo-cæcal valve was completely destroyed. The ulceration seemed to have originated in the glands of the intestine. Tubercles also existed in the lungs; so that the case might be regarded as an example of scrofulous ulceration of the intestines, bearing some resemblance to melanosis.

Valvular Disease of the Heart; the Pathology of its early Stage.—Dr. Corrigan exhibited a specimen illustrative of valvular disease of the heart, in its incipient stage, and made the following observations in reference to the case from which it was taken. There have always been abundant opportunities of examining diseases of the heart in their advanced or confirmed stages, but it is not often that we have opportunities of examining cases in which the diseased action had only existed for a short period of time; and in this point of view, namely, as showing them how valvular disease commences in this organ, the case he was about to detail possessed considerable interest. A girl of about fifteen years of age, well formed and muscular, was admitted into the Whitworth Hospital, on Saturday, the 16th February, 1850. Her chest was well developed, and she had enjoyed good health up to the period of her first attack of illness, which occurred about a month prior to her admission; this enables us to fix the date of the commencement of the attack which gave rise to the cardiac disease. About a month back she was seized with cough, retching, and violent palpitation of the heart, in consequence of which she was for some days confined to her bed. She then, however, returned to the discharge of her duties as children's maid, and remained in service up to the period of her admission. Two or three days before admission, the palpitations became exceedingly troublesome, her strength rapidly declined, and her ankles began to swell, and in this condition she was admitted to hospital. On Monday, the 18th, he (Dr. Corrigan) saw her for the first time, and her symptoms were then nearly the same as on the day of her admission (Saturday); they were those of well-marked pericarditis and endocarditis. Her countenance presented the peculiar expression of anxiety which belonged to these diseases, the muscles of the forehead being slightly contracted, the lips livid, and the alæ nasi dilated like those of a person who had been after running a considerable distance. The pulse was quick and sharp, and bore very little pressure. On examining the chest it yielded a clear sound on percussion posteriorly, and the respiration was natural. Anteriorly the right side of the chest was also clear on percussion, but on percussing the left side, a symptom occasionally present in pericarditis was observed, namely, a dulness extending from the sterno-clavicular articulation down to the ensiform cartilage, and occupying altogether a space of at least six inches square. On applying the hand over the chest the heart was felt strongly pulsating over a considerable extent of surface; and another very remarkable symptom was observed with the naked eye, namely, a wave swelling up between the cartilages of the third and fourth ribs, and corresponding in its rise and fall with the pulsations of the heart below the left mamma. There was a bruit de soufflet occupying the entire of the cardiac region, but no friction sound whatever. The patient lived until the 22nd of February, and then sank and died, never having once complained of pain throughout the whole course of the attack.

Autopsy.—On throwing back the sternum the pericardium lay

exposed to view, and exactly corresponded with the line of the dulness which was observed during life. The pericardium contained a very large quantity of straw-coloured serum, slightly tinged with blood, and on turning it back the heart presented a beautiful appearance, arising from crimson, purple, blue, vermilion, and other rich colours, blended together on its surface, in that peculiar style which painters term "stippling." On slitting open the heart a recent deposition of lymph, or fibrine of the blood, was found upon one of the aortic valves. The edges of the mitral valve were thick and pulpy, and of a yellowish colour, like that of ordinary lymph. The principal feature of interest in the foregoing case is, our having been able to fix the date of the commencement of the disease, and to observe the manner in which valvular disease of the heart begins, namely, by deposition of lymph, which is thrown out by inflammatory action, in the same manner as in inflammation of serous membranes in other parts of the body. The lymph being thus deposited upon the valves, or within their folds, undergoes a process of contraction, by which the edges of the valves are gradually drawn in together, so as to reduce the size of the opening. The knowledge of this fact naturally suggests the treatment, namely, to put the patient under the full influence of mercury, with a view to promote the absorption of the adventitious fibrine. This case, in combination with similar cases laid before the Society, also shows us how long lymph may lie on the valves or pericardium, and yet remain in a state capable of being absorbed.

MEDICAL MISCELLANY.

SELECTIONS FROM BRITISH AND FOREIGN PERIODICALS.

On Chloroform in the Treatment of Cutaneous Diseases, and in some Nervous Affections. By M. Devergie, Physician to the Hôpital Saint Louis.

When therapeutics become enriched by the addition of a new remedy, every physician should hasten to test its value according to his opportunities, in order to ascertain what advantage can be derived from it in the treatment of disease. With this object in view I have tried chloroform at the Hôpital Saint Louis, and in my private practice. This agent is not alone a powerful anæsthetic, for its great volatility entitles it to be classed with ether and ammonia,

and, in a word, with all bodies which are capable of very rapidly withdrawing a large amount of caloric from an inflamed or irritated part.

I have tested chloroform both in hysteria and in the treatment of cutaneous diseases, and shall now proceed to detail the results I have obtained from it in these affections.

A young lady of rank, aged 19, had for two years been subject to hysterical attacks, recurring three, four, or five times in a month. Many modes of treatment had been adopted, various physicians had been consulted, and the remedy finally recommended was marriage. This young lady had, in addition, for fifteen months laboured under a lichenous affection of the face, neck, and hands; and after the unsuccessful employment of several medicated applications, she was placed under my care. My attention was at first drawn entirely to the lichenous eruption; the hysterical attacks were alluded to by her parents as a merely secondary affection. After many months of treatment the cutaneous eruption was entirely cured, and it was when I had succeeded in this that my attention was called to the attacks of hysteria. I at first thought that I observed a certain regularity in their occurrence, and I administered the sulphate of quina. This seemed to retard their appearance, but various emotions soon reproduced them with more intensity, and I witnessed many of the fits. It was hysteria in the second degree, with loss of consciousness, automatic movements, convulsions, and general agitation of the body: the attack lasted several hours. In this state I found the patient at my next visit; the attack had lasted a quarter of an hour when I arrived. I poured twelve or fifteen drops of chloroform on a handkerchief, and compelled her to inhale it without completely obstructing her mouth. At the end of some minutes she fell into a sort of collapse, slept quietly, and although it is now more than a year since this remedy had been adopted, the attacks have not returned.

In many similar cases, in which, however, the attacks were less violent, the hysterical symptoms have been quickly allayed by the exhibition of a draught containing twelve drops of chloroform in about two ounces of fluid; so that I am induced to consider it a much more powerful antispasmodic than ether, a fact already pointed out by others. We know how efficacious it has been found in neuralgic pains. Frictions with an ointment chiefly composed of chloroform, in the proportion of four parts to thirty of lard, relieve such pains quickly and with much certainty.

A lady had been for many years subject to attacks of most intense facial neuralgia, so as seriously to affect her general health. She had already caused several teeth to be drawn without obtaining relief, and, notwithstanding, determined to have another removed, attributing to the decay of these organs, from which her brothers likewise suffered, the pains she experienced. She went to her dentist, and begged him to place her under the influence of chloroform. This being effected, the tooth was removed. It is now many

months since the operation was performed under the influence of chloroform, and although many decayed teeth still remain close to those which were extracted, the neuralgia has entirely disappeared. I am convinced that many practitioners could bring forward similar facts.

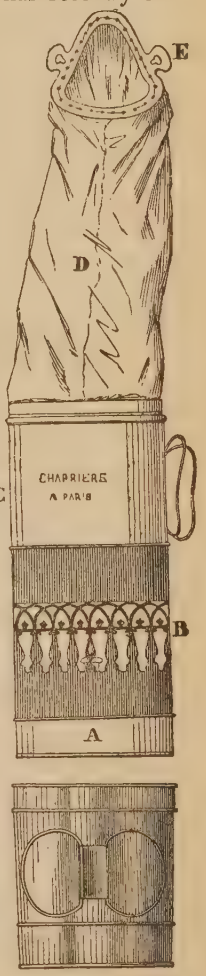
I now come to speak of the application of chloroform to the treatment of diseases of the skin. From the experiments I have made on this subject, it would appear that chloroform is without any marked efficacy, so far as the diseased condition of the skin itself is concerned. It can only, in some cases, allay certain symptoms of the disease, for example, the itching. It has, in this respect, but little effect on eczema and herpes, but in the other pruriginous eruptions, lichen and prurigo, it is very efficacious. Now to diminish, if not completely remove so prominent and troublesome a symptom of a cutaneous affection as partial or general prurigo, becomes in itself a means of cure. By allaying the irritation, we prevent the patient from scratching, and thus place the disease in a condition much more favourable for cure. The intensity of this symptom in prurigo pudendi, or prurigo ani, is well known. Patients affected with general prurigo sleep an hour or two at the most, and are then awoke by the itching which the heat of the bed excites: they uncover themselves, walk about their room, stretch themselves on the floor in search of the coolness which alone brings some relief to the irritation, which they can only allay by scratching until the blood oozes from the papulæ. They lie down again, sleep for a little, but are soon again aroused; and it is not until the dawn of day, that, exhausted with suffering and fatigue, they obtain a little quiet and repose.

In this disease, not only does chloroform, like camphor, allay the irritation, but, thus spread over the surface of the skin, it volatilizes, and in the state of vapour acts on the entire nervous system, sometimes procuring in this manner relief and sleep. It is in this latter point of view only, that I would attribute to chloroform some superiority over camphor; for I must say that in respect of allaying irritation, I should not be inclined to recognise in it a marked advantage over this latter agent; its effects, besides, are not always certain. When I tried this remedy on a large scale, I had two patients affected with prurigo of the anus in the same ward, and nearly opposite to one another. In one case the disease was in a short time remarkably relieved by the chloroform ointment. In the other the same ointment produced no result, although we might say there was apparently identity of disease in the two cases.

Upon the whole, we may, I think, consider chloroform, in reference to cutaneous diseases, as a remedy strikingly similar to camphor, in its power of allaying irritation. In addition it has the advantage of acting on the nervous system in general, by means of the atmosphere in which it places the patient; and it is more sedative than camphor. But, on the other hand, it has a less decidedly resolvent action on the skin. Like camphor, it may be employed

with success in all papular affections. With the exception of these it is, I believe, of scarcely any service in diseases of the skin. I generally direct the chloroform ointment to be prepared with two or three parts of chloroform to thirty of lard.—*Bulletin Thérapeutique, April*, 1850.

New Fumigating Apparatus.—M. Charrière has recently exhibited before the National Academy of Medicine of Paris, a new fumigating apparatus, chiefly designed for the respiratory organs, and which has been successfully tried in many of the hospitals of that city. The various instruments hitherto known and employed in practice laboured under the disadvantage of being furnished with tubes which only allowed the medicated matters to pass in the form of vapour of insupportably high temperature. Exigencies of the moment have led to the adoption of extemporary contrivances, which, although more suitable, but imperfectly fulfilled the requisite indications. The apparatus of M. Charrière, however, possesses the advantage of enabling the patient, 1st, to inspire and expire into a large elastic tube, in itself forming part of the reservoir of the fluid; 2ndly, to inspire only (expiration being performed without the mouth being applied to the instrument) medicated vapours at any temperature; 3rdly, and lastly, to direct at will the vapours to any special part of the body.



The accompanying wood-cut represents the apparatus raised and ready for use. A. Spirit lamp to warm the fluid contained in the reservoir, or to keep up its temperature. B. Perforations by means of which the lamp can be extinguished, in case the temperature of the liquid should rise too high. C. Reservoir to contain the fluid intended for fumigation. D. Large flexible tube. E. Mouth-piece intended to enclose the nose and mouth.

The smaller wood-cut represents the entire apparatus enclosed in its case.—(*Comptes rendu de l'Academie.*) *Bulletin Général de Thérapeutique Médicale et Chirurgicale*, 30 *Janvier*, 1850, p. 85.

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